MARINE MAMMAL PROTECTION ACT REAUTHORIZATIONS—PART 2

HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT

OF THE

COMMITTEE ON
MERCHANT MARINE AND FISHERIES
HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

REAUTHORIZATION OF THE MARINE MAMMAL PROTECTION ACT OF 1972 BY EXAMINING THE QUESTION OF MINIMIZING THE TAKE OF DOLPHINS OR PORPOISE IN THE COURSE OF YELLOWFIN TUNA FISHING IN THE PACIFIC OCEAN

SEPTEMBER 8, 1988

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MARINE MAMMAL PROTECTION ACT REAUTHORIZATIONS

THURSDAY, SEPTEMBER 8, 1988

House of Representatives, Subcommittee on Fisheries
and Wildlife Conservation and the Environment,
Committee on Merchant Marine and Fisheries,
Washington, DC.

The subcommittee met, pursuant to call, at 10:00 a.m., in Room 1334, Rayburn House Office Building, Hon. Gerry E. Studds (chairman of the subcommittee) presiding.

Present: Representatives Studds, Carper, Hutto, Clement, Young, Saxton, and Saiki.

Staff present: Will Stelle, Counsel; Gina DeFerrari, Professional Staff; Jeffrey Pike, Senior Professional Staff; Joyce Sacco, Clerk; Jim Hoff, Sea Grant intern; Rodney Moore, Minority Professional Staff; and Tom Melius, Minority Professional Staff

Mr. Studds. The subcommittee will come to order.

The Chair apologizes to the witnesses. As I gather the staff explained to you insofar as our procedures are capable of explanation.

There were two votes back to back just now on the Floor of the House. We think we have temporary breathing space in which we can fit in most if not all the testimony before the next interruption from the Floor.

We are subject to interruption throughout the day. That is the nature of this beast. We apologize. But we have to live with it.

STATEMENT OF HON. GERRY E. STUDDS, A U.S. REPRESENTATIVE FROM MASSACHUSETTS, AND CHAIRMAN, SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT

Mr. Studds. Today the subcommittee concludes its hearings[1] on the reauthorization of the Marine Mammal Protection Act of 1972 (MMPA), by examining the question of minimizing the take of dolphins or porpoise in the course of yellowfin tuna fishing in the Pacific Ocean.

Before we begin today's hearing, I would like to inform my colleagues on how the subcommittee intends to proceed with the consideration of the MMPA reauthorization. As Members recall, during our May 10th hearing representatives from the fishing and environmental communities presented a joint-agreement concerning an interim exemption for commercial fishing in the taking of depleted species.

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[1] See Printed hearing, No. 100-63 for copy of bill and other material.

Since that time the staffs of the Merchant Marine Committee and the Senate Commerce Committee have been working with those parties to refine that proposal. A few additional issues such as the public display of marine mammals and the conditions under which marine mammals are permitted to come into this country are also being reviewed by the staffs.

Because our legislative days are few and protracted debates about amendments to the act will surely result in no reauthorization this Congress, I am hopeful that the rather unorthodox procedures followed by the committee staffs of attempting to obtain, as much as possible, a consensus document will expedite the legislative process.

Marathon meetings between the two committee staffs and representatives from the agencies, the Marine Mammal Commission, and virtually every group which has expressed an interest in these issues have been held throughout the recess period.

Because we have postponed the subcommittee markup of the act until September 14th, it is my expectation that by next Monday at the latest, we will have a complete set of draft amendments for Members review.

I have instructed the subcommittee staff to make themselves available to assist you or your staff, should you so request.

This morning we focus on an extremely difficult and emotional issue, that of dolphin mortality in the course of tuna fishing. One who has participated since 1973 in every major debate concerning tuna/porpoise, I am all too aware that there are no easy or quick solutions.

The last time we debated this issue during the 1984 reauthorization, many of us felt that we had strengthened the act that further reductions in mortalities would be achieved. Unfortunately, exactly the opposite has occurred.

Since 1984, the mortality of dolphins at the hands of foreign fishermen has increased four fold. In 1987, estimates show that foreign fishermen may have killed up to eight times more dolphins than U.S. fishermen.

Tragically the regulations implementing the 1984 amendments were only issued this spring, four years after the Congress required that foreign fishermen take precautions comparable to those of our own tuna fishermen in preventing serious injury and mortalities.

Moreover, while the U.S. tuna fleet has done more to protect dolphins than any other tuna fleet in the world, there is a sense by many of us that the progress made in the seventies has been stalled and that there are additional measures which should be taken to reduce further mortalities and injuries to dolphins.

A broad coalition of environmental organizations has embarked on a campaign to amend the act to reduce to zero the mortality of dolphins by all tuna fishermen. To do this, the coalition has recommended a number of amendments to the act.

Today we intend to ask our witnesses some very specific questions concerning these suggestions to help me determine how best to achieve our common goal. Because I suspect the solution involves a blend of technology, trade, economics, science and diplomacy, we have asked a panel of experts to join us today.

I look forward to receiving their counsel on the question of how best to reduce the mortality of dolphins.

Mr. STUDDS. The gentleman from Alaska, the distinguished ranking Member.

STATEMENT OF HON. DON YOUNG, A U.S. REPRESENTATIVE FROM ALASKA

Mr. YOUNG. Thank you, Mr. Chairman.

I am pleased to join you in welcoming the witnesses today, but regret we are once more covering ground that has been gone over by this committee since 1973. We concluded in the past there was no practical way to achieve a zero quota in the tuna fishery.

We have established a strict quota on dolphin take then in 1984, supposedly to provide stability to the U.S. tuna industry as well as ensuring the total dolphin population are protected. Our actions remind me of what the Americans did to the Indians, breaking a treaty at the earliest convenience.

Problems with the incidental take of dolphins are not caused by the U.S. fleet, but by foreign fleets. It is the U.S. which is made to suffer.

When the 20,000 annual quota was set in 1981, there were 12 tuna canneries operating in the U.S. territory. Today there are seven.

There were 93 vessels in the U.S. fleet. Today there are 35. Ninety three in 1981.

Seven years later there are 35. How many more Americans are we willing to put out of work while we allow foreign fishermen to catch tuna and dolphins at their leisure?

I am willing to see reasonable standards of regulation imposed on the U.S. fleet in the interest of conservation. I am not willing to export our fleet and jobs overseas.

Mr. Chairman, we worked on this a long while and you have been a leader in this area. I question this coalition that is presenting their points of view today.

I wish they would spend more time and effort trying to make sure that the world-wide problems of the environment are addressed and not just the U.S. Each day we pass a law saying we are solving a problem, and it takes our American jobs away and ships them abroad.

Yet the same group keeps talking about balancing the budget and making the American workers have a fair share. Yet they each day urge us to pass legislation to export those jobs crucial to our people.

I look forward to hearing the witnesses. I doubt if we will turn up any clods.

If you don't know what a clod is, you have not been on a farm. I doubt if we find any information.

I think it behooves this committee to recognize if we do not act, we will probably put in a bill that will discontinue the present system.

If that is what those people wish to have, we shall do so. What we are going to do, as far as I am concerned, in this committee what is right for all parts which we are charged with. That is the porpoise and the fishermen of America.

Thank you very much.

Mr. **Studds**. I thank the gentleman.

Without objection, his full definition of clod will appear and where they are found.

Mr. **Young**. I used to be a very good baseball pitcher. I learned being the pitcher by throwing clods at people. I could strike them if they put their head around the corner. We are going to watch and see if we turn up any new clods today.

Mr. **Studds**. I appreciate that.

The gentleman from Delaware?

STATEMENT OF HON. THOMAS R. CARPER, A U.S. REPRESENTATIVE FROM DELAWARE

Mr. **Carper**. Just I might mention before I give my statement, when we had the annual baseball game, I got hit twice by Republican pitchers. I thought of them as clods.

Mr. Chairman, I appreciate your holding this hearing today on a clearly contentious and recurring problem. Though I recognize the considerable improvements made by the U.S. tuna fleet in terms of reducing dolphin mortality, and I commend them for that success, I want to make sure we don't lose sight of the original intent of the Congress. That is the incidental kill of marine mammals committed during commercial fishing operations be reduced to insignificant levels approaching zero mortality.

It seems to me we need to know whether tun can be caught without trapping dolphin. Has a credible effort been made to find that out? I don't know of any evidence of such an effort in the material presented to me today.

While I appreciate the industry's effort to improve techniques and technology for saving dolphins, I see in increasing dependence on dolphin sets. We also have to get a handle on the foreign catch.

I appreciate your efforts, Mr. Chairman, to seek ways to tighten up the comparability requirements of foreign fishermen. I think we need to assure ourselves the U.S. regulations are indeed moving toward zero dolphin mortality.

Mr. Chairman, thank you.

Mr. **Studds**. Mrs. Saiki.

Mrs. **Saiki**. Is there any difference between Alaskan clods, or Massachusetts, or New Jersey clods?

Mr. **Young**. To my knowledge, no. We will have to have a committee hearing to have some expert witnesses testify to which ones are different.

Mr. **Studds**. Does the gentlewoman from Hawaii have an opening statement?

Mrs. **Saiki**. Not yet.

Mr. **Studds**. We have a panel of six witnesses. We are going to ask you all although you represent different perspectives, different backgrounds and I suspect different approaches, to give your oral testimony all at once before we go to questioning in the order in which you appear on the list here.

I understand the staff has asked if you feel it physically possible to convey your oral remarks to no more than five minutes.

Some of you look more anguished than others at that question. The full written statement of each of the witnesses will appear in the record in their entirety.

I do understand that some of the statements are longer and more detailed than others, and it may be more difficult than usual to summarize that in five minutes. We ask you to do the best you can.

Bear in mind we have constraints in time and in some respects perhaps the most productive of this will be the opportunity for Members to question you and perhaps for you to have a spirited exchange with one another as we watch.

Having said that, we will go in the order in which you appear, beginning with Mr. James Brennan, Assistant Administrator for Fisheries of the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA).

STATEMENT OF JAMES W. BRENNAN, ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION; ACCOMPANIED BY CARMEN BLONDIN, DEPUTY ASSISTANT SECRETARY FOR INTERNATIONAL INTERESTS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Mr. **Brennan**. Thank you, Mr. Chairman.

I am here today to present testimony that William Evans would have like to have delivered if he were here. Dr. Evans is out of the country. He has had an extensive and long interest in this subject, and would have preferred to be here.

I am also accompanied today by Mr. Blondin, as you mentioned. Mr. Blondin is the newly appointed Deputy Assistant Secretary for International Interests in the Department of Commerce, which reflects, Mr. Chairman, the increased emphasis and importance of fishery production in international trade.

Mr. Carmen Blondin will be able to handle any of the questions that may arise regarding trade later in the testimony.

I will try to adhere to your admonition and just touch on a few of the highlights of my testimony that perhaps should bear some emphasis.

The first point that has been raised by several of your colleagues is that there is a problem of porpoise mortality in the purse seine fishery. That problem is created, in my mind, by the high level of catch by the foreign operations in the eastern tropical Pacific Ocean (ETP). In the last two years the catch as reported to us by the Inter-American Tropical Tuna Commission (IATTC) by foreign vessels is several times higher than the rate of the U.S. vessels fishing in the same area.

In March of this year we did publish interim final regulations governing the importation of yellowfin tuna to address this issue. The regulations were, perhaps, overdue, but they are now in effect.

They require an observer program to monitor and report porpoise mortality, an annual certification program to ensure comparability with United States requirements for protecting porpoise, and a test to determine if the foreign nations marine mammal kill rate is comparable to that of the United States.

As of today only Mexico has submitted the documentation that is required and review of that documentation is underway. Our regional director Charles Fullerton tells me he believes the data that has been submitted is for the most part complete and responds to the requirements of our regulations.

I should make this point, though, that the remaining purse seine fishing nations—El Salvador, Panama, Spain, Vanuatu, Ecuador, the Cayman Islands, and Venezuela—have not submitted any of the required information by mid-September.

Our regulations specify that importing yellowfin tuna from the ETP will be prohibited as of the 15th of October. That provision is automatic under our regulations unless we act to make it effective more quickly.

We do believe that the most effective way to reduce overall porpoise mortality is through an international program among nations fishing for tuna associated with porpoise.

Currently the IATTC is an effective partner in an international porpoise research program to reduce porpoise mortality in the ETP.

Their observer program currently provides the only source of scientific estimates of porpoise mortality for the international fleet. We will continue our cooperation and support for this international program in an effort to further reduce non-U.S. porpoise mortality.

I would like to address the issue of observer coverage. Since at least 1977 there have been suggestions that we should require 100 percent observer coverage on all U.S. fishing vessels to ensure the use of porpoise safety gear and techniques.

We continue to believe that 100 percent coverage is both expensive and excessive for the domestic fleet. What we are talking about, Mr. Chairman, would be essentially, if we increased our current 50 percent coverage to 100 percent, a new program that would cost about an additional $1 million a year. We frankly, question whether the value we would get from this additional coverage is worth it.

You also in your invitation asked us to comment on sundown sets. We had originally considered abandoning sundown sets.

In 1986 we issued guidelines which prohibited sundown sets unless the certificate holder installed and used high-powered lights to reduce the higher rate of mortality associated with sundown sets. It is clear that sundown sets have appeared to kill more porpoise than daytime sets.

We had hoped that the installation of these lights would successfully redress the situation, and stated we would examine, after two years of experience operating with these high-powered lights, the results to determine whether we should act further with respect to sundown sets. We will finish our analysis of the two-year program and release the analysis of the data later in this year.

If we ultimately conclude that we must impose a sundown set ban on our fleet, we will require all foreign nations to have a similar ban if they wish to have a comparable program acceptable under our regulations.

I would also like to discuss this question of phasing out porpoise mortality. We, frankly, don't believe that phasing out porpoise mortality for the United States fleet will necessarily result in greater overall protection for the porpoise in the Eastern Tropical Pacific.

By reducing this take to zero, we would effectively be banning purse seine fishing on dolphins. Some of the United States fleet might move to the western fleet. Another portion might restrict its fishing to school fishing. Some would probably change to foreign flag. Purse seining on dolphins is the most efficient way to catch large yellowfin tuna. We doubt this method will be abandoned by all nations fishing in the ETP unless other satisfactory fishing methods can be developed.

Foreign fishing fleets outside our direct control might increase their efforts and have a greater impact on the porpoise than they are having now.

The fact that we have got no response to our regulations is, perhaps, a suggestion that there are alternate markets. Mr. Blondin can address this later on in the testimony or perhaps in discussions with you.

I think the other question that I would just like to say a few words about, trying to keep within your five minute admonition, is the question of skipper performance. There are so many variables that may affect a set and lead to a disaster set that are really not the fault of the skipper, that we have in the past had the view that it would be impractical to have skipper performance standards. My view is changing somewhat.

We are looking at the statistics. Sixty percent of all porpoise sets result in zero mortality.

Disaster sets occur in only 6 percent of all sets on porpoise. Yet that results in over 76 percent of the observed porpoise mortality. These may be acts of God, but it may also be that it relates to the skill and experience of the skipper.

We don't have performance standards. But our regional director Charlie Fullerton has started working with the tuna industry to discuss what these standards might be, and how they might be developed and applied.

If we did have such standards, this might enable us to identify the poor performers and require them to take remedial training or actually remove them from the fishery—if it is a question of a person that doesn't have the ability or the willingness to protect porpoise.

Our standards would also provide a reward for the good performers by ensuring they would be able to fish throughout the year unhampered by the fact that a quota has been reached because of inefficient fishermen.

The one point I would wish to leave you with this morning is that a precipitous attempt to reduce to zero porpoise mortality in this fishery without the backing of sound science could actually backfire and result in an actual lessening of our ability to provide protection for these animals.

That concludes the summary of my testimony, Mr. Chairman. I will wait to hear from my other panel members.

[The statement of Mr. Evans can be found at end of hearing.]

Mr. STUDDS. Mr. Blondin?

Mr. BLONDIN. I have no prepared statement.

Mr. STUDDS. You want to make an unprepared statement?

Mr. BLONDIN. I can quickly.

Just to follow on what Mr. Brennan said in the trade area to indicate that in our analysis while in the past we commanded a large portion of the tuna market, I think when you review current statistics, we no longer have that kind of leverage.

I think that the points that were made by Mr. Brennan certainly are born out in our analysis of the data we have.

I would be prepared to go into statistics should you desire to do that.

Thank you.

Mr. STUDDS. Mr. Vance Hughes, Legal Counsel, Tuna/Dolphin Environmental Coalition.

STATEMENT OF VANCE HUGHES, LEGAL COUNSEL, TUNA/DOLPHIN ENVIRONMENTAL COALITION

Mr. HUGHES. Thank you, Mr. Chairman.

I will try to be very brief in outlining the program that the Environmental Coalition has put together after substantial discussions with committee staff, with fishermen and certainly with the government.

The coalition is very broad at this point. Defenders of wildlife reviewed the testimony as of late and joined in with us.

We do have some resource people here today that can, perhaps, answer some of the more detailed questions, if necessary, Lesley Sheeley and Dean Wilkinson from Greenpeace as well as David Philips from Earth Island Institute are sitting behind me.

My experience with today's issues began when I represented the U.S. Justice Department in the Land and Natural Resources Legislative Program under both the Carter and Reagan Administrations and as Chief of the Wildlife Marine Resources in the Lands Division. I have dealt with a number of these wildlife and marine resources issues. They are always difficult.

The facts are always difficult to get or estimate. They can be very contentious.

It has been our experience, and I think it has been this committee's, that the best way to get to the bottom of the problem and find a rational solution is to do as you are doing today, pulling together the various view points in hopes of finding some common ground.

What we have proposed—when I say we have proposed it, I think it takes pieces of proposals from all of the interested parties—is, basically, a three-pronged program, which clearly has the objective of moving more swiftly toward zero mortality for dolphins.

We strongly believe after reviewing the experience in the last 16 years of experimentation since the Marine Mammal Protection Act was enacted, largely to deal with the dolphin problem, that the energy that is missing from the program at this point is a clear end point, a clear expectation by the fishing community that at some point soon the mortality of dolphins caused by the tuna fishing must be zero.

We believe that end point will provide the incentive for the fleet to find the technology, to improve performance of troubled fishermen and to improve the foreign fleets.

The three prongs of the program that lead us, we believe, in a reasonable period of time to zero mortality includes certain amendments that would strengthen the foreign program. One of those amendments is that we believe it should be very clear in the law that a nation, what we call an intermediary nation, usually a processing nation, that accepts imports of tuna from any nation that has been banned from importing tuna into the United States, should in turn also be banned from exporting tuna to the United States.

We have got to be sure we cut off the possibility of laundering tuna from a nation that is no longer allowed to directly export to the United States by sending it through such an intermediary nation.

In addition, we believe the foreign program's comparability scheme will work much better if the U.S. program has more specific requirements than just a concern for a rate of kill. One aspect of that program would be to establish a strong decertification program for our own skippers who fail to meet performance standards.

Obviously, these various elements will also, we think, improve the performance of the U.S. fleet and provide greater fairness between those skippers who are doing an excellent job versus those that we keep hearing about that simply are not performing up to the standard.

We also think decertification should be used as a sanction much more frequently than has been the case by NOAA in the past. Certainly when you find the skippers deliberately violating the law, such as shooting at dolphins, those skippers should not simply be prosecuted. They should be decertified, removed from the general permit and not allowed to fish.

We understand that recently NOAA has improved its enforcement record by issuing notices of violations to skippers who had been harassing our observers. The observer component of the program is extremely important.

This country owes a debt to those individuals who serve as observers. The observers program has been important to the fishing industry, it has been important to gathering data.

We believe there is an observer effect. With an observer on board, all of the crew tries harder to save dolphins. It is human nature. It is not a slam against any fisherman. I think we are all that way. When you know a policeman is following you, you obey the speed limit. As a statistical matter, that is the way people behave.

We think the observer program should be 100 percent coverage because of the observer effect and to ensure the data is absolutely accurate.

We also think that with these additional requirements that we are recommending, that the presence of the observer is extremely important to assure that the various performance standards are met.

Another element of that program is to prohibit sundown sets. The evidence is pretty clear that sundown sets contribute a disproportionately large number of the mortalities. Those sundown sets should be prohibited starting 90 minutes prior to sundown.

We think the Congress should prohibit clearly the use of explosive such as seal bombs. It is, I think, fairly well accepted that using explosives to herd dolphins so they can be encircled, harms the way that they see under water—namely their echo location system. If they can't hear, they can't see. It strikes me that it would be very difficult to get out of this room if a fire broke out if you could neither hear nor see, and the explosives have that effect.

From what we know, a number of these provisions we are recommending are supported by a larger consensus of interested parties than you might think.

The final prong of our program, and it is a part of Congress' program and has been on the books for some time is to assure that vigorous research and development of new alternatives for fishing for tuna should go forward.

It is absolutely amazing to me and to the coalition, and I think to most people in this room, that we have not vigorously pursued from the government's side that research program in the past.

I know that the fishing industry is interested in finding better ways to fish, better ways to avoid dolphins. We need to all get together and see that that program is conducted and conducted immediately.

As I said earlier, we believe that if it is clear that four years hence the quota will be zero that all the parties will work more effectively together to find better performance standards, to find better fishing technology than if we have what appears to be, at least in the minds of some, a perpetual exemption from the act to allow the kill of 20,500 dolphins by the U.S. fishery and a proportional number by the foreign fishery. That number, that level of kill, especially as more boats join the foreign fishery, is likely to go even higher than the numbers we are facing from the last two years.

In conclusion, after 16 years of experimentation with how to stop the killing of dolphins, a commitment we, I think, all made to the American people that long ago, we are simply proposing that we take another four years to work out the details so that 20 years after we began there will be a zero take of dolphins by the tuna fishery.

Thank you very much.

[The statement of Mr. Hughes can be found at end of hearing.]

Mr. STUDDS. Thank you, sir.

We go next to Mr. David Burney, representing the United States Tuna Foundation.

STATEMENT OF DAVID BURNEY, GENERAL COUNSEL, UNITED STATES TUNA FOUNDATION

Mr. BURNEY. Thank you, Mr. Chairman.

I don't doubt for a moment the sincerity of the remarks by Mr. Hughes. Where we find it difficult to reach an agreement is on the idea that if you set a target of zero, somehow magic is going to take hold and we are going to find a solution to what has become a very complex and, obviously, a very emotional issue.

I take issue with anyone that doesn't believe the U.S. tuna industry has not been responsible in its actions toward saving dolphins. Over the years we have proven to this committee that through the actions we have taken, we have led the way in reducing dolphin mortality.

It is a tragedy that dolphin mortality continues to occur in the foreign fleets at the rate that has been documented and referred to earlier by Mr. Brennan.

In 1984 Congress examined the status of the porpoise stocks and tried to examine what the U.S. tuna industry had done and whether it had acted responsibly. Congress also tried to decide what could be done to lower the foreign fleet dolphin mortality.

It was decided at that time that, based on the status of porpoise stocks the U.S. quota would be statutorily set for an indefinite period. The current quota has first been set in 1981 after a very costly rule making proceeding in 1980.

In 1984, this committee also decided that something had to be done with the foreign mortality. As we all know, the Committee directed the Department of Commerce to promulgate import regulations aimed at lowering this mortality.

No one can blame the U.S. tuna industry because these regulations didn't go into effect until this year.

We worked with the Inter-American Tropical Tuna Commission (IATTC) and a number of the foreign governments to get them interested in the IATTC tuna/porpoise interaction program.

It is ridiculous to say that if you don't have a cop on board, you are not going to try to save dolphins. We have proven that there is an economic incentive to get dolphin out of the net. If you have dolphin mortality, you have a more difficult time in your fishing operation.

It is less economical to kill dolphin. We have lost a life trying to save dolphin and we have suffered serious injury to our crew members trying to save dolphin. We have been praised worldwide for the effort we put forward. We still have people asking what is the tuna industry doing now to save dolphin? What are we doing now?

I pointed out in my testimony that we recently developed new snap rings that we believe will get us to backdown sooner, thus limiting the time that the dolphin are in the net. We are currently working with double cork lines to eliminate canopies which are a major cause of dolphin mortality.

We don't do this work in a laboratory tank or on a computer. We have to be out in the middle of the ocean testing this equipment. The last thing we want to do is to tell everybody in the fleet to put double cork lines on their boat and then see the mortality go skyward if they don't work properly.

We have to work with this technology over time and make sure it is proven to be effective. Then we can go to the fleet and get them to accept it.

Look what we have tried that didn't work. These are things we did in cooperation with the Federal Government and they proved unsuccessful.

We tried gates in the cork line, antitorque cable, antisway balls on the purse cable davit. This means nothing to anybody in this room. To a fisherman this was a real effort to save dolphins.

I take issue with anyone that says the U.S. tuna industry has not acted responsibly. We recognize there is still a problem out there.

We tried to work with you since 1984 to get foreign governments involved in a program. You will hear from Dr. Joseph on this matter in greater detail.

He will tell you that for the first time in 1986 all of these governments joined the Tuna-Porpoise Interaction Program of the IATTC. They have to work with us. They have to adapt our technology, our techniques. And more than anything else, they have to learn through our educational program. That is how we improved over the years.

We are still teaching new entrants in this industry. We have new people all the time. Yes, they have a higher mortality at first. But as we review their set logs and work with these people, we find their mortality comes down.

We also have people—and I will not try to hide that from anyone—that are less efficient than others. We have got to bring their efficiency level up or those people are going to have to step out of the fishery.

There is no question about that. But we are trying, and we are working on it.

Ratcheting us to zero? What is that going to accomplish? You are going to end up having every foreign fleet in the world out there taking our place with no controls whatsoever. That is not the answer to this issue.

The answer is for us to continue to work together to find the solution. And if you don't believe that we are making the effort, then let's have a full-scale administrative law judge hearing on this subject.

Let's determine the status of the stocks. I have heard things such as, "the stocks may be," "the stocks could be," "it is possible that stocks have a problem."

The truth is we last had a hearing in 1980 to determine the status of the stocks. That hearing ended up in a court of law with a federal court finally supporting the recommendation of the administrative law judge.

Nobody liked it because the administrative law judge concluded that the stocks were healthy at the time. They had very high populations.

A lot of papers have been written since that time that argued that the ALJ's decision was incorrect. But these papers have never been scrutinized. Let's have another hearing to review this subject. We are not afraid of hearings.

We will go to any hearing, we will bring our scientists, we can have the government's scientists and Mr. Vance can bring whatever scientists he has.

We can talk about the status of stocks again. If you want to talk about technology and techniques as well, we will put our record on the line with anybody.

If we are going to do anything to reduce mortality in the future, we have to look at the foreign fleets.

Please come up with a program that these people are going to join. Don't come up with a program that is going to drive them away.

We have got their attention now. You may only have Mexico onboard presently, but they have the biggest fleet in the Eastern Tropical Pacific. We will get the other fleets in there if you act fairly.

If you keep changing the law with the U.S. fleet, what hope is there for a foreign fleet? You told foreign fleets four years ago to come up to the U.S. standard. Four years later, and the program has not even started and you are saying we are going to change the U.S. standard.

Point out to us what we are doing wrong. What haven't we done? What technologies haven't we tried?

I heard statements that we are not using even the best technology available. We are. I think Mr. Carper said the goal is zero mortality.

In 1981 this Congress said the tuna industry would meet that goal of zero mortality by continuing to use the best technology available to them.

We have done that, and we have improved it over the years. We have an excellent release rate record. We have got room for improvement, and we can improve, but it doesn't happen overnight. Where we are today, releasing 99.34 percent of the porpoise encircled, the incremental improvements we will make in the future will be small. But we have not stopped trying. We are still experimenting. The two things I referred to earlier along with different lighting techniques are going to help us.

Look at our record objectively. Don't look at the rhetoric.

There is a definite commitment in this industry to humaneness. There is a definite commitment in this industry to reducing down this level of mortality to the lowest level possible.

Thank you.

[The statement of Mr. Burney can be found at the end of hearing.]

Mr. Studds. Next, Dr. James Joseph, Director of the Inter-American Tropical Tuna Commission.

STATEMENT OF JAMES JOSEPH, DIRECTOR, INTER-AMERICAN TROPICAL TUNA COMMISSION

Mr. Joseph. I am a scientist and have been involved 30 years in the scientific study and conservation of marine species. The Inter-American Tropical Tuna Commission is an international body established in 1949, whose objectives are to conserve the tuna and tuna-like resources in the Eastern Pacific Ocean.

This morning I would like to speak about the Commission's dolphin program, what we are doing, and what we are trying to do. I would like to express some of my own opinions on how I think we can reduce dolphin mortality.

As you know, this tuna/dolphin problem has been with us since the 1950's. Initially, it was a U.S. problem through the 1950's, 1960's and into the 1970's. In 1972 the U.S. developed a program attempting to reduce mortality.

They were responsible at that time for most of the mortality, there being only a small tuna non-U.S. tuna fleet operating. The non-U.S. fleet began to develop in the mid 1970's, and at the present time comprises about 70 percent of the total activity in the Eastern Pacific Ocean.

When the non-U.S. fleet began to expand the Commission governments themselves undertook a program to address the problem of tuna dolphin mortality. Basically the program has several objectives, obviously, to reduce dolphin mortality, to reduce the needless, and careless killing of dolphins, and to ensure that the dolphin population survive in perpetuity.

The Commission began its active program in 1979, working with the other governments. Its program consists of various components. Most important it estimates the total mortality of dolphins in the international fleet.

It tries to estimate trends in the abundance of the dolphins in the Eastern Pacific Ocean as well as identify techniques of fishing and gear types that are effective in reducing dolphin mortality. It then attempts to transfer that technology to the international fleets.

This program began in 1979, but really, Mr. Chairman, the program became only fully effective in 1986. There is criticism about the program, about why it took so long to get a full scale program underway.

There is also criticism about some of the estimates that we make of dolphin mortality.

With respect to the first thing, there should be some criticism. It did take a long time to get the program fully underway.

But let's not forget that we are dealing with sovereign nations who are allowing our organization to place our employees on their vessels that are fishing in their own territorial zones, and to monitor what those vessels are doing. That is not easy to do.

It is not unprecedented; but it is unusual. It took a lot of time and a lot of doing to get those nations to relinquish their sovereignty and to cooperate. We have full cooperation now.

With respect to the reliability of our data concerning mortality. We do provide the only estimate of total mortality in the area.

If it weren't for our program, you wouldn't have much of an idea about what was going on out in the ocean respecting dolphins. You wouldn't know how many animals were being killed.

The estimates are pretty good in a scientific sense, Mr. Chairman. We have done a lot of developmental work in designing statistical models to estimate the mortality. The estimates are statistically very sound.

There is a lot of criticism that they are not, but the criticism is unfounded and unsubstantiated.

There is criticism that boats that don't carry observers don't behave in the same way as boats that carry observers. Really that is a difficult thing to assess.

To be absolutely certain that they behave the same, you need 100 percent observer coverage on boats. But most of the data that we examine both from unobserved boats, for which we collect data from log books and observed boats, show the two sets of data to behave similarly. We are quite confident of our estimates of dolphin mortality.

We have a staff of people who train our scientific technicians throughout the Americas. We try to cover 33 percent of all the trips made in the Eastern Pacific. That is the basic data with which we make our estimates. That data is used to estimate mortality, and trends in abundance.

What we try to do is look at the changes in the abundance of porpoise populations from one year to the next because what we would like to do is assess the impact of the mortality that we are estimating on the stocks. The estimates that we provide should not be used to attempt to define the absolute abundance of the population but rather relative abundance.

What they are good for is to look at whether a population is remaining unchanged, going up or going down. And for most of the major populations, we have made such estimates.

All of them show, or almost all of them show a decline in population from the early 1970's to the late 1970's. This is to be expected because the mortality was fairly high at that time.

In the late 1970's and the early 1980's, many of the populations have stabilized. In the late and mid 1980's the populations have generally increased. There has been a lot of concern expressed about the the major stocks, the Northern offshore spotted and eastern spinners on which most tuna are caught. Both show increases in population.

Two populations, however, do show a continuing decrease. Both of them are small populations of animals and are not heavily sampled—the central common dolphin and the southern spotted dolphin. They show a continuing decrease, but they are not any lower than they were back in the early 1980's.

From experience we know that they can recover from that level without much trouble if mortality isn't increased. I am not overly concerned about the stocks with respect to my responsibility to the survival of these animals in perpetuity.

The third thing our technicians collect is information which can be transferred to the international fleet. We have a fairly substantial program in that direction which is designed to reduce the number of dolphins killed.

We hold workshops in the other countries. We hold meetings, one on one meetings with captains who have experienced high levels of mortality. We hold a variety of types of training sessions.

We go on all of the—we try to go on all of the foreign fleets in a new program designed to ensure that their nets work properly and are aligned properly. Poorly aligned nets kill more dolphins. We are getting good cooperation from the countries.

I think, Mr. Chairman, that our program is showing some progress. I think we are making headway.

I think the fact that mortality declined in 1987 over 1986, and it looks like it is going to decline more in 1988, is attributable in some way to our program.

Mr. Chairman, I hope that we can continue with that program. I hope whatever decisions your committee makes will not discourage the cooperation of the other nations.

What we are all interested in doing and what I have a mandate to do is to conserve the populations of dolphins. If we make requirements that are unachievable, then what we are going to do in fact is increase the kill of dolphins.

I want to make reference to a couple of things that have been mentioned here, and a couple of things in your letter and some of the correspondence that has been going around lately. These refer to the marine mammal, amendments dealing with import regulations.

As they are proposed, as I understand them, there is to be a requirement that foreign nations, or non-U.S. nations reach a level within 1.25 times the kill rate of the U.S. by the end of 1990. There is also a mile post in the proposed regs.

I think it has to do with 2.0 times the U.S. kill rate. It is going to be very difficult, Mr. Chairman, for those nations to reach the 1.25 level, but I am optimistic that some of them are, indeed, going to do that.

However I am concerned that the requirement of 2.0 as a mile post is going to discourage some of the nations from even trying.

In fact, in one instance, I think it might have already happened because in that case the nation doesn't think they can achieve that. So what I am asking you is to consider those numbers that you are putting forth. What we don't want to do is drive the nations out of this program.

I will explain why in a minute. I think some of the testimony has already stated that.

The other thing I want to comment on is the zero kill, Mr. Chairman. First off, I don't think that it is going to be possible using the type of purse seine gear that we have to continue fishing tuna in association with dolphins and have a zero kill.

There is going to be some level of mortality. Obviously, we want to get that down as low as we can.

What you can succeed in doing, I think, by setting a zero kill is getting the U.S. kill to zero. I think that is achievable.

But what will happen, what is going to happen is that you are not going to have an U.S. fleet. That is why it is going to go to zero.

I think that they will not be operating in the Eastern Pacific. I think the vessels will leave the area because they are not going to make it fishing on school fish alone. They are going to be sold to other governments or leave the area and fish somewhere else.

The U.S. kill will go to zero and it will look good on paper. What is going to happen is the kill of dolphins in the Eastern Pacific is going to increase.

Because if a zero kill is set for the United States, then the United States will require a zero kill for nations who wish to export to the United States. I don't think that many of the other nations are going to be able to reduce their kill to zero or be willing to do so because they have a big investment in the tuna industry, and they are going to want to continue fishing.

So what they are going to do is sell their fish elsewhere. Indeed, Mr. Chairman, there are markets elsewhere. A lot of the fish is already sold in the European market.

Some of it is sold in Thailand and other places around the world. They would prefer to sell as much as they can to the U.S. because it is closer and more economical for them to do that.

Given the alternative of no market in the U.S., they are not going to quit fishing, but will develop markets elsewhere. They are going to continue to fish.

The incentive for them to cooperate in this international program is going to diminish. We are not going to know how many dolphins are being killed.

We are not going to have a transfer of technology to those vessels to reduce the kill. And we are making some progress doing that now.

The kill, Mr. Chairman, of dolphins is going to go up and we are not going to know what it is.

We are going to have possible problems with the dolphin population in the future unless we can continue to keep the cooperation of these nations in a program that is now making some headway in reducing the kill.

Mr. Chairman, I have used my time. I am not going to comment anymore.

But I suppose you will have some questions. I just want to make the statement, though, that I am not standing here, sitting here justifying or condoning the killing of dolphins.

I think it is a terrible thing to do. And I think we must, indeed, do something to reduce that kill to the lowest possible level. And I think we are moving in that direction.

What I am standing here doing is trying to give you my opinion, on how we can reduce it.

Thank you.

[The statement of Mr. Joseph can be found at the end of hearing.]

Mr. STUDDS. Next is Dr. William Fox, Professor of Biology and Living Resources, University of Miami, and the Marine Mammal Commission.

STATEMENT OF WILLIAM W. FOX, JR., COMMISSIONER, MARINE MAMMAL COMMISSION

Dr. FOX. Good morning, Mr. Chairman.

I have a nine page statement. Rather than reading it, I will abide by the Chairman's admonition and summarize my comments with the understanding that it will apper verbatim in the record. I won't repeat the comments you have heard today several times already.

I think that Congress and this committee are faced with two primary decisions on the tuna-porpoise issue. The first decision is on the general approach to further reducing the mortality of porpoises in the Eastern Pacific. One alternative is to continue to reduce the mortality consistent with technological feasibility. This is the approach that was used to get to the current plateau that we have in the U.S. fleet. It worked extremely well up to reading this plateau.

The other alternative is to force the U.S. quotas to zero in a few years. In my own opinion, if you do that, you will force the problem completely out of direct U.S. control. You will only have indirect control over the problem.

Since zero mortality is just not possible, foreign nations will have a great incentive to abandon all efforts to reduce their mortality. The control of porpoise mortality would then be entirely dependent upon the U.S. market influence and the ability to keep track of what tuna is caught by what method and by whom. I think that is a very difficult thing to do. Therefore, I support a continuation of the approach of reducing mortality consistent with technological feasibility.

Assuming that the Committee decides to adopt the technological feasibility route, then there are again two approaches. One is to very closely control gear and procedures, including an observer program coverage increase, individual performance standards, and individual quotas. The other approach is to simply set an overall quota and allow the industry to fish as it sees best to meet that quota, as has been done for the past several years.

The Commission supports the first approach. I support the first approach. It was the successful approach that got us to the current mortality plateau but with a much larger U.S. fishing fleet, Returning to that approach provides the opportunity to reduce further the U.S. kill. It also provides a more rigorous set of standards for the foreign fleet that would be achievable.

The comment I would add at the end is this: as I sat in this room many years ago and predicted, this has become a foreign problem. We need to address it as a foreign problem. We need to have comparability required and measured in a comprehensive manner but in a program, that does not chase away countries from participating.

I will be glad to answer any specific questions on any of these issues.

[The statement of Mr. Fox can be found at the end of hearing.]

Mr. STUDDS. Thank you.

Let me say to our witnesses, I appreciate your being here. Some of you traveled a considerable distance to come here. It is the intention of the Chair to impose upon the panel of witnesses as long as it takes, as long as they can take it and we can take it to air all of the major questions associated with this subject.

I will say to Members, that while we will try hard to adhere to the five-minute rule, we will have as many rounds of questions as the Members wish to have.

Let me observe at the beginning that I think there is at least one fundamentally common denominator amongst all of the witnesses, notwithstanding obvious differences in the approach to the problem, that is we ought to reduce as much as we can the mortality of dolphins associated with tuna operations.

If we had more time, I would ask somebody to tell me the difference between a dolphin and a porpoise, but I won't do that. I do think what is in common—and I trust the staff to say what we all have in common, all the members of the panel and all the Members of the committee, is to do that which is most likely to reduce as much as possible the mortality of dolphin associated with the fishing for tuna.

Is that general principle adhered to by all of the table?

Without objection, of course.

Now we come to where rational men and women may differ. That is how best to achieve that purpose. And if I may charitably assume that all the men at the table are rational, we do already have some differences of opinion as to how best to achieve that purpose.

There are a lot of issues associated with this question. They have been raised by all or most of the witnesses. I am not going to, at this point in the questioning, ask detailed questions about all of them. There are questions with respect to the comparability standards insisted upon by the understand for the foreign fishing imported into this country.

How much of comparability should be required by U.S. law is clearly an issue here for us to address. What would happen if the Congress were to require immediate comparability?

What would happen if the current proposal in the regulations becomes the law or remains the U.S. policy? Those regulations give the foreign fleets two years to achieve comparability? Is there some position in between that we ought to adopt?

There is the question of third party importation of tuna. Is there a possibility if the U.S. were to embargo under our law, imports from a particular country, that another country could serve as an intermediary for that product? There is the question of sundown sets.

There seems to be pretty general agreement that there is a substantially greater mortality associated with sets at sundown. Should we act to prohibit them? If so, how should we define them?

There is the question of performance standards for U.S. captains, vessels. Ought we to have a system whereby we are able to identify consistently bad actors, poor performers, and disqualify them from the fishery? Is that feasible or wise?

There is the question of observers on U.S. vessels and observers on foreign vessels. The IATTC seems to be satisfied with roughly 30 percent observer coverage on foreign vessels.

We had a year last year where we approached 100 percent observer coverage on U.S. vessels. It is felt by some that 100 percent is highly desirable. Others think a lower number is equally dependable. That is an issue for us.

With all of those questions, there is, of course, perhaps the largest single one, which is do we or do we not move as suggested by Mr. Hughes, and then some of the folks for whom he speaks, towards a ratcheting down, phasing down to zero in a particular number of years?

I believe you have requested four years. There are those, such as Mr. Hughes, who suggested that is the only way to create incentives for the U.S. fleet and analogously for foreign nations who wish to continue to use the U.S. market to take the steps they would have to take in order to meet that.

Virtually everybody else in the panel are suggesting it would not have that effect, that, indeed, if we were to put into law a requirement that in "X" years, four years, say, we reduce our dolphin to zero, the effect of that would ironically and tragically be an even greater dolphin mortality. There is a real difference of opinion there.

That is an important one, one I suspect Members of the committee will want to probe in the course of their questioning.

Let me begin with one or two questions on that subject. Then I will turn it over.

Perhaps of all the important questions, that last one is the largest and perhaps the most difficult one for those of us, all of us we have agreed that want to minimize the catch of the mortality of dolphins.

Let us assume for a moment that we were to take the position in U.S. law that, one, in four years the U.S. mortality of dolphins had to be reduced to zero. Any foreign nation wishing to sell its tuna in this country would likewise have to reduce its associated mortality to dolphin to zero within four years.

It seems to me quite obvious that if that were to be effective, two things would have to be the case.

One, is that it is technologically possible, at least for the U.S. fleet if thee is to be a fleet to meet that quota. If it is not, obviously there would no longer be a U.S. fleet.

Two, is whether foreign nations would respond, as I assume Mr. Hughes would suggest, by somehow meeting the quota themselves. Or if that were impossible or undesirable from their perspective, would they simply say, "the hell with the international commission," and particularly, "to hell with the United States market. We will sell our fish elsewhere and not be bothered by these troublesome requirements with respect to minimizing dolphin mortality." That raises an economic question.

I guess Mr. Blondin, you are the logical person to address the question to.

Suppose we had in law a four-year phase down to zero and an analogous requirement on foreign nations who wish to export to our market, do we know enough about the current marketing of that tuna, number 1? And number 2, about potential alternative markets to know whether or not that would be an effective tool, an incentive to foreigners?

Mr. **Blondin**. Mr. Chairman, I think when we are looking at current data and reflecting on what I said earlier, while at one time we had a great deal of leverage, 45 percent of the tuna that was caught in the world was consumed in the United States. That is not the case anymore.

Looking at the Latin American countries, at least with some reference to data here, it shows a picture of change that is occurring which means that the United States certainly has less leverage and that there are other alternative markets for Latin American countries.

In 1980, Latin American countries exported 74,000 metric tons of tuna. This includes all types of tuna, but largely yellowfin and skipjack. The United States received 76 percent of that. The European Community 16 percent.

The latest data we have, which is 1987, indicates that while the shipments have gone up to 175,700 metric tons, that the European Community now receives 48 percent.

The United States receives only 39 percent now and Japan has increased to 12 percent.

Mr. **Studds**. Break that down to yellowfins?

Mr. **Blondin**. We can try to break it down. The difficulty is that that data is hard to break down.

Looking at generally the way that occurs, I can do that for the United States. I can't do that for the European Community. The yellowfin that we import constitutes about 26 or 27 percent of the total imports.

If we were to look at the imports into the United States of yellowfin tuna, again, from 1987 data, and we imported 53,400 tons of yellowfin tuna, Mexico provided 30 percent; Panama 22 percent; Venezuela 19.5 percent; Equador, a little more than 8 percent; Taiwan, 6.7 percent; France, 2.6; and other nations 10 percent.

It is obvious from those figures that 50 percent of the yellowfin tuna imports came from Panama, Venezuela and Equador, not even including Mexico. When you include Mexico, we are talking about 80 percent.

Again one has to keep in mind the earlier comments I made about the shifting market in the European Community. That has been growing rapidly, largely due to demand in the European market as well as the weakness of the U.S. dollar. I think it is anyone's guess as to how much can be absorbed by the market. When you take a look at yellowfin the amount of this amounts to approximately 3 million metric tons that are caught in the world and marketed. You can see that the yellowfin tuna catch from Latin America is only a small percentage of the world catch of all tunas.

Our general assessment, by those that were looking over the figures, as well as myself, was that there could easily be alternative markets for Latin American caught yellowfin tuna.

Mr. **Studds**. I take it yellowfin tuna has not been a particularly attractive commodity on the Japanese market?

Mr. **Blondin**. It is beginning to increase. I saw data recently where they are beginning to buy much more yellowfin than in the past. Those markets are increasing in Japan.

I can provide data on it. I don't have specifics with me. But I have seen newspaper articles from Japan indicating that the market since last year was beginning to grow tremendously.

Mr. **Studds**. I understand from the written testimony of Mr. Hughes that there is at least some effort within some of the nations in the European Community to enact a similar prohibition. Are you aware of that?

Mr. **Blondin**. Yes, sir, we are aware of it. We have asked the Embassy in Brussels to keep an eye on it. So far as I know, nothing positive has resulted.

Mr. **Studds**. What would be the effect?

Mr. **Blondin**. I am not sure what may result. It could take the form of a resolution, or they could go so far as a regulatory provision which would have the force of law.

Mr. STUDDS. If the European Community were to prohibit the importation of tuna from any country where dolphin mortality was connected with it, what would that do?

Mr. BLONDIN. With the European Community taking 48 percent from Latin American countries, it is a significant market. The question is whether they will get there.

In any of the conferences with United States officials in Europe, we don't think it has gone beyond the discussion phase.

Mr. STUDDS. Are there members of the panel who wish to respond to this question either in general or to what Mr. Blondin has said?

Mr. Hughes?

Mr. HUGHES. Just a few observations, not to belabor it.

The information Mr. Blondin provided, I think, supports the basic information that we have been operating from. Clearly, the United States market and the European market are key.

If we block our market to those who do not reduce and eventually cease the killing of dolphins, it will be a substantial loss of market. It appears Mexico recognizes that and is trying to comply with the comparability programs since such a large share of what we do import comes from Mexico; some of the smaller fishing nations apparently aren't taking it as seriously yet. They have not been quite able to catch up and, perhaps, are working to do so.

As to the European Economic Community, we are encouraged by the rapid progress, given that the way they legislate can be as slow as we do sometimes. They are moving apace to bring up and consider a legislative program that might ultimately ban the importation of tuna caught on dolphin.

I would urge the U.S., perhaps, do more than "keep an eye on their efforts" but, in fact, encourage them. I know in the past where we have been struggling with this problem as a country, we have solicited the help of the EEC, joining us in an international approach.

I think Congressman Young is right, the environmental community has not done enough internationally, because there are relationships between what we do for the environment, for conservation, and economics. We have to be dealing with this as world community.

Certainly the environmental coalition is working with Europe right now along those lines. I would encourage the U.S. Government to do so as well.

Mr. STUDDS. Mr. Hughes, several times in the course of your phrases, of your testimony, the phrase "unacceptable level of dolphin mortality" appears. What is an acceptable level?

Mr. HUGHES. The position of the coalition is zero is the acceptable level. I think we have tried to temper what we have presented to everyone in this round of the reauthorization discussions with a recognition of some of the things that David Burney spoke of earlier, and so have other witnesses, that some of these things can't be accomplished overnight.

We have debated within the coalition whether to ask for a termination of setting on dolphin right now if that is what it takes to stop the mortality. That debate has come out with a recognition that some time will be needed to develop and implement all the various other components of the program. So that some of the techniques that the fishing industry has been experimenting with can be proved out.

We think, regarding alternative technology that one of the aspects that doesn't seem to be focused on nearly enough is how to catch tuna without chasing and encircling dolphins.

We recognize that the U.S. fishing industry and some of the foreign fishermen are doing everything they can to avoid dolphin mortality. But it nonetheless occurs when you encircle the animals in a net.

If we can find a way to catch tuna; and, in fact, in the past only about half of the sets for catching yellowfin tuna were on dolphin. We have now for some reason increased that into the 90-percent range.

Only last year did we drop back down for the U.S. fishery into the 70 percent range, and we only killed 14,000 dolphin as opposed to the previous year where we exceeded the quota of 25,500.

We think the acceptable level is zero. We are trying to find a way to go that will bring us to that point, just as the rest of these witnesses are.

Mr. **Studds**. Supposing technology were such that it were possible to take the current kill, the U.S. kill, approximately 20,000, say, and reduce it to 2,000 in four years.

Would that be acceptable levels of mortality from your perspective, that kind of improvement of performance?

Mr. **Hughes**. I personally would see that as a glass clearly half full as opposed to one half empty. Again, the goal, we think, should be zero.

I should quickly point out the environmental community is not as blind to certain realities as some might think. A large part of the community has been working with the rest of the fishing industry, on a problem of incidental take of other marine mammals in the other fisheries. We think the community and the fishing industry put together a program that will help address of that incidental take problem.

What troubles us so much on the tuna porpoise problem is to us it is not an incidental take. It is more of an intentional take. When you intentional circle the animals knowing that no matter how hard you try, you are going to kill a substantial number.

In 60 percent of the set you are going to kill something. We would like to see it go to zero. Maybe if what you are saying is that in four years we get to 2,000 and take the last 2,000 out the following year, it is certainly worth considering.

Mr. **Studds**. Does anyone else want to respond to the subject?

Mr. Burney?

Mr. **Burney**. Just a couple of comments. This has kind of drifted away from the original question. But I think we ought to say something here.

If you effectuate a zero mortality policy, and if we are right, those of us that have been around this issue for a number of years, what you are going to do is to drive the U.S. fleet out of existence. You will leave the fishery to foreign fleets without any controls whatsoever.

There is more than just the impact on the dolphin. I will agree that they are the highest priority. But we must also look at a major canning center in Puerto Rico, which has a high unemployment rate.

We employ somewhere in the neighborhood of 40,000 people in this industry. If there is no fish delivered there, obviously there is no need to have canning facilities in that particular region.

Also the consumer, which I am sure nobody is going to give priority to. The price of tuna is going to go up quite high if the U.S. fleet is removed from the ETP fishery.

If we leave, you have taken a major supply of fish from a fishery located close to the United States and you have forced our industry to go on the spot market and buy fish at a much higher price. Those are factors I don't think can be shoved under the door.

I agree that dolphin are the primary concern. On alternative fishing methods, we worked with the National Fishery Service, and every other interested group, including the environmental community, on possible alternative fishing methods.

We held a workshop in 1986 for that purpose. Everyone concluded that we, the industry ought to keep working on new technologies to reduce the mortality because alternative fishing methods didn't show much promise.

I understand we are going to have another workshop in the middle of October for this same purpose, which we will attend and do everything in our power to follow the advice of those present. Hopefully, we will have people there that have advise this time.

On sundown sets, we all recognize there is a higher mortality when you are setting after dark than in daylight. There is no doubt about that.

On skipper performance standards, we are not against them. We want them to be flexible enough so that we, the people that have the expertise in this area, can find the people that should be removed if that is necessary. We should have the leverage over those people to make sure improvement does take place if it is possible. We are not against this sort of thing.

We have talked with your staff about ways of addressing sundown sets. We don't want a third of the fishing day cut out. That makes you noncompetitive. You will drive foreign fleets away if you tell them we are going to take 90 minutes out of your fishing day.

We should address this issue rationally. The time to back down from letting the skiff go is 75 minutes. This is the average time that I think that we would all agree upon.

If we are talking in terms of a 30-minute after sundown prohibition, you must first understand that there is 20 minutes of sunlight after sundown. This means that 55 minutes before sundown the set must start.

If we are correct, the new snap rings that we have been working with, we can get us to backdown somewhere between 20 and 25 minutes sooner than we have in the past. We will document this. Then the 30 minute prohibition that the staff draft contained is certainly acceptable.

We are not ignoring the problems. We are just trying to find solutions.

Mr. STUDDS. Very quickly, doctors, if you will.

Mr. JOSEPH. I wanted to refer to your question about tuna markets, Mr. Chairman, and the fact that we are talking about the U.S. market as well as the European market.

Tuna is traded internationally. If the U.S. market were closed to Eastern Pacific fish and the European market closed to Eastern Pacific fish, that is not going to stop fishing in the Eastern Pacific.

We also have the additional problem of nations that don't normally trade with the United States that do fish tuna, are capable of fishing tuna and given the opportunity to catch 100,000 pounds of tuna, they are going to do it.

Mr. YOUNG. Thank you, Mr. Chairman.

I am interested in Dr. Joseph. What you are saying is if, in fact, this committee approaches zero tolerance, the zero quota, there will be a vacuum created.

The industry itself would increase in numbers and fill that vacuum. Is that what you are saying?

Mr. JOSEPH. If the U.S. market were closed to, say, Mexican fish, the U.S. would buy some fish somewhere else, from the Indian Ocean or what have you, to fill that vacuum. Mexico would fill that vacuum created by the U.S. purchasing elsewhere.

I am not an economist, and perhaps I spent too much time in Alaska. With reference to your definition of a clod, we all know about the permafrost in Alaska, clods there are frozen, non-active.

Mr. YOUNG. Really, Mr. Chairman, what I am interested in is the concept of what will happen. What would happen, what do you think again would happen to the remaining 35 ships if this committee was to come down and say there would be no porpoises and no dolphins? What would you do?

Mr. BURNEY. Let me assure you of one thing. You could not operate in the Eastern Tropical Pacific if there was a total prohibition of setting with dolphin. That is just a fact of life.

We didn't create the phenomena. God knows why these two species swim together. Nobody understands it.

I think somebody mentioned we should find ways to break the bond. We have tried this.

Killer whale sounds was recommended to us as a possible idea, but it didn't work. You can't fish out there strictly on logs and school fish. It is not economically feasible. Nobody would ever try to do that.

The question is really where does the U.S. fleet go. We might be able to move into the Western Pacific under the treaty that we have.

But as you know, we have a limitation on the number of boats that can operate out there under the treaty. The rest would have to make a real tough decision. That decision, in my opinion, would be to sell your boat to the highest bidder and try to recoup some of your losses. You don't have another choice.

Mr. YOUNG. Would they be able to work those boats under foreign flag by reflagging?

Mr. BURNEY. The people you are putting out of a job would have to worry about that. The boat owner isn't necessarily the person that is going to operate that boat. There are two different things at work.

Mr. STUDDS. Mr. Blondin has to catch an airplane. If there are any Members who wish to address a question to him right away.

Thank you, sir.

You are excused.

Mr. BLONDIN. Thank you.

Mr. STUDDS. Go ahead.

Mr. YOUNG. Mr. Burney, how many tuna plants to we have in the United States territories?

Mr. BURNEY. I think we have five in Puerto Rico, and we have two in American Samoa.

Mr. YOUNG. There are none in the Continental United States?

Mr. BURNEY. We have one on Terminal Island. I am not sure whether it is doing anything but producing pet food at the present time.

Mr. YOUNG. Hawaii?

Mr. BURNEY. We have none there.

Mr. YOUNG. The main recipients, if we were to reach this zero requirement would be Pureto Rico?

Mr. BURNEY. They would certainly feel the impact of this. There is no question about that.

Mr. YOUNG. What if this committee were to come down with the concept that we would have to buy any tuna caught by American fishermen that met the requirement of zero catch of dolphins?

Mr. BURNEY. The problem is where can you go to catch it. Once you start disrupting the normal market flow of this type of a product, I think Dr. Joseph stated it, this is a world-wide commodity. Everyone knows what has happened to our industry over the last five or six years.

We got clobbered by imports coming in from areas that had labor rates substantially below the U.S. That is why our processing facilities moved to Puerto Rico and American Samoa.

Even there, we pay higher labor rates than some of these other countries. We don't have much of a chance to compete in that realm. I don't know any way of overcoming this.

Mr. YOUNG. Mr. Hughes, do you—you don't think this would happen, that if you were to reach your acceptable zero catch, you don't think the fleet would move?

Mr. HUGHES. I think there would be some reshuffling in all the fleets. Some boats would make a decision that they didn't want to fish the new way, and other boat owners would come in.

I think, for example, for our fleet there might be some boat owners or captains who would prefer to get out. But others would take their place and try it the other way. I think there are some other facts that perhaps help flesh out the picture.

It is my understanding of that yellowfin tonage that Mr. Blondin gave us, all of that is not caught on dolphin. Some of it is already caught on school fish are under flocks of birds.

When we are talking about yellowfin, the primary way it is sold, as I understand it, is canned tunafish. The world supply of tuna is something like 10 times layer than the yellowfin that is caught on dolphin; that is, 10 times more tuna is already out there in the world supply.

I am not sure as a component of the overall tuna trafficking in the world, this yellowfin caught on dolphin, and primarily canned, is going to find its market as easily as one might think. There are some nations who simply don't care much for canned fish.

The fact that right now even after a market shift that Mr. Blondin reports, the yellowfin seems to still be (adding it up quickly) about 88 percent going to the U.S. and the European communities. This suggest to me that adjustment by the fleet to catching yellowfin another way than catching on dolphin can be made.

Finally, I would simply observe that when we worry about jobs, one of the things we might note is that, as I am told, the primary reason, or one of the reasons that yellowfin caught on dolphin is popular (brings a good price with the cannery) is they tend to be larger than yellowfin caught the other ways. The canneries pay a premium, perhaps a couple of hundred dollars per ton premium, to get those larger fish because they take less labor to process. So we have already lost some jobs because of our reliance on the large fish caught on the dolphin.

It is a fairly complicated subject. I think the economics—I guess a lot of it is in this town and this country have come to believe that the market place will adjust these things if we give it a chance.

Mr. YOUNG. That may be true.

I know, and I will say this in criticism of your coalition, again. We are shipping coal from Colombia to Philadelphia and into Miami because we passed laws in this country to make it uneconomical to ship coal 50 miles away. You say what has that got to do with tuna? A lot.

In my opening statement, I want to try to save that dolphin. I also want a realistic approach of 40,000 jobs in an impoverished area.

You say, catch smaller tuna not on dolphin, and you can create more jobs. Realistically we are not competitive worldwide.

I have watched this Congress in 10 years do great things. Yet we are an indebted nation with imports. It is not necessarily labor.

I don't know from your coalition addressing this issue worldwide. That deeply disturbs me. I can't say the laws are bad.

You know, you have got to look at the world global problem. This business of it doesn't only affect the United States, it affects everyone, or we are passing laws that put our people out of work. That is my biggest concern.

I have no other questions.

Mr. CARPER [presiding]. Thank you.

Let me say in the absence of Mr. Studds, he has gone to vote. He will be returning shortly. I will be relinquishing the chair to him when we returns.

Dr. Joseph, on the issue of dolphin stocks, what are the trends for dolphin stocks? I hear some saying the trend is down, some say stable, some say mixed. Where does the truth lie?

Mr. JOSEPH. Mr. Chairman, you know, one gets confused with terms. They talk about depletion of dolphins and things like that.

Those are legalistic terms. I like to deal more in probabilistic terms.

The best estimates that we have of the trends in the abundance of dolphins indicate that the dolphins in the early and mid 1970's, the populations of those, declined as one would expect because the kill made on them was high. Then they reached their lowest level on the average in the late 1970's.

A number of them have increased after that time and are continuing to increase. Others are continuing apparently at the same level, and two small populations, the southern spotted and the central common dolphins, show a continuing decline.

But all in all, for the major species of dolphins that are involved in the fishery, I am encouraged by the estimates of abundance that we are looking at now.

Mr. CARPER. Any of our witnesses wish to dispute that?

Mr. BRENNAN. If I might, not to dispute it but to point out that the law requires us, the National Marine Fishery Service, to do on a five-year assessment of the affected porpoise stocks.

It is a big ocean out there, and it takes a lot of time and effort and cruising to do this research. In 1991, we will have the results of our assessment, which will talk in terms of the trends of populations. But at this time we are not ready to say definitively where we are.

Mr. HUGHES. I would like to comment on that if I could just a moment.

I think I can safely say the environmental coalition agrees with David Burney on this issue, and perhaps a lot of others. But on this issue we agree with David Burney.

NOAA should make the estimate that the law requires it to make of the abundance of the various tuna stocks. It has not done so since David Burney beat them in court in the late 1970's.

We need to know those numbers. We see a lot of unofficial reporting from NOAA which suggests to us and suggests to scientists and suggests to committees of scientists connected with the whaling commission that some of the stocks are in real trouble.

If it takes it for Congress to direct NOAA to do so, we would urge Congress to direct NOAA to give us some estimates of absolute abundance so we would know where we stand. It would be helpful for us, we think, to better understand whether there are certain stocks perhaps that are coming back, and then there are, perhaps, other stocks that are in serious trouble and should not be fished on at all.

We don't have the answers to those questions, because we don't have a clear, official answer at this time.

Mr. CARPER. I recognize Mr. Burney.

Mr. BURNEY. My name was mentioned of beating somebody in court. I would like to clear the record. I didn't beat anybody in court.

Scientists had their day, the industry had their day, the environmental community had their day, and a decision was reached. It is important that everyone understand that it was a very costly, exhaustive hearing process we went through at that time.

I don't think it is possible for the National Marine Fishery Service or the IATTC to give you a definitive report on the status of stocks. That is why you, the United States Congress, in 1984 said let's get off of the status of stocks. Let's do a trend analysis.

As Mr. Brennan said, two years of that trend analysis has been completed. Are we panicking and moving beyond that? You told the National Marine Fisheries Service, "come back to us at the completion of the trend analysis."

Mr. Carper. Let me ask another question of you, Mr. Burney. My understanding is that since the early 1980's, the practice of setting on the dolphins has increased. The number that I have in my material here suggested in 1981 the percentage was under 50 percent; in 1986 it was 94 percent.

Are those numbers correct? Is that a trend continuing, or has it been reversed?

Mr. Burney. As I tried to point out in my testimony, what you are trying to interpret is effort. When a fisherman goes out to fish, he looks for fish.

He doesn't look for dolphin, and he doesn't look for logs and he doesn't look for school fish. He is looking for fish in any form whatsoever.

1985 and 1986 were particularly heavy years where fish was found in association with dolphin. To get there a fisherman didn't pass up school fish and didn't pass up a log where there were fish available to him.

It just so happened that after the El Nino in 1984, there were more large yellowfin. The large yellowfin continue to associate themselves with the porpoise for some reason. The trend has now changed again. In 1987, it came down to 78 percent.

It is down somewhere in the 60's this year. I know we are back almost to normal again. Changes like this are going to happen over the life of this fishery.

Mr. Carper. I am going to have to run to vote. In my absence can you answer the following question for the record.

This has been a good hearing.

I appreciate all the witnesses' input.

Mr. Burney, are there alternatives to this technique of setting on the dolphins? Are those alternatives being explored?

Could you take a minute and respond to that, if you will?

Thank you.

Mr. Burney. As I stated earlier, we have explored alternative methods of fishing. Everyone is aware of the voluminous record that has been created before this committee that purse seine fishing is the most economical way to catch tuna. No one disputes that.

The Japanese and other nations that were primarily long line fishermen are all converting over the purse seine methodology. It is probably the only way that tunas will be caught for the canned tuna market in the future.

When we looked at alternative fishing methods, and I go back to the 1986 workshop, everyone threw up their hands at the end of a day and a half and recognized that purse seine was the only methodology that could be used. It was agreed that the U.S. tuna industry was using the best technique available to them.

We were asked to continue to try to refine the method and make improvements. That is what we have done.

Mr. Studds [presiding]. I am going to go down to some of my other questions, they will be sufficiently lengthy.

Let me take up one at a time, some of the related issues mentioned in my introduction in my opening question.

They are in no particular order of consequence.

What percentage of fishing trips must be covered to be certain we are getting statistically reliable and accurate figures?

The Inter-American Tropical Tuna Commission seems, if I understand you correctly, sir, to be happy with approximately 30 percent.

Mr. Hughes stated very strongly that in order to be certain, you have to have 100 percent of observer coverage on U.S. vessels and foreign vessels if they are to require some compatibility.

I would like you to give the committee your feelings as whether or not 100 percent coverage is essential to get reliable data or whether we can rely on less than that.

Dr. Fox?

Dr. Fox. Thank you, Mr. Chairman.

I would be glad to comment on that question.

I think you need to keep separate the questions that you have in mind when you address the observer program. If you are interested in deriving a kill rate standard that can be compared among years or if you are interested in deriving a kill estimate that can be used in an impact model that has a sufficiently small bias from year to year, statistically speaking, then based on my prior involvement with the program, anywhere from 25 to 40 percent of the trips being sampled was sufficient. Therefore, I would agree with the comments made by Dr. Joseph and by Mr. Brennan that 33 percent is sufficient for those purposes.

There is a second aspect, however, the aspect of ensuring compliance with the regulations, ensuring that the kill rate is as low as possible overall, ensuring the performance of individual skippers is accurately measured and that they use the gear appropriately. For that aspect of the observer program, the greater the observer coverage, the better.

Dr. Joseph said he had data that showed that observed ships and unobserved trips were statistically comparable.

I remember the time I was involved with the tuna observer program in the 1970's where the United States had a requirement for individual ships to report their own kill. We also had observed kill from a sample of trips.

The kill rates reported on the unobserved vessels were substantially less than those on the observed vessels. This confounded a certain member of this committee at that time. He couldn't understand why, and if this was the case, why didn't we simply remove observers in order to reduce the kill. I don't think that the kill on unobserved vessels can in any fashion be equal to that on observed vessels. I think it is greater. I think it is probably in many cases significantly greater. Whether or not it is statistically significantly different or not is a statistical question and not a question about reality.

Mr. Studds. Dr. Joseph?

Mr. Joseph. I would like to comment on that a little more and clarify with respect to my remarks that the behavior of unobserved vessels and observed vessels was the same. By that I mean they operated in the same area, they operated the same percentage of time on dolphins. I wasn't referring to the kills.

But I would like to just bring up one thing with reference to my friend here, Dr. Fox's, opinions, as well as other people's opinions.

Dr. Fox is a statistician, a mathematician, similar to my background, and he knows better than I that what often appears to be a situation often times does not hold up when one looks at data and subjects those data to statistical tests.

For example, I will refer to an affidavit I read about an observer's experience on a vessel saying basically that he thought that when there was an IATTC observer without enforcement capability on a vessel, the kill would be higher than when an observer with enforcement capability was on board. That is how it appeared to him. We have a lot of statements like that which are based on feelings of opinions.

But when one takes the actual data and compares the IATTC observers and what they observed the kill to be with a National Marine Fisheries Service observer, many times who were the same people but on different boats and different trips, there is no difference in the kill rate.

So what appears to be obvious many times to people is not so obvious when one looks at the numbers. And I am going to refer back to the questions, and you weren't here, Mr. Chairman, about the status of the stocks.

I can guarantee you that 5 or 10 years from now we are going to be sitting and arguing about the status of stocks like we were 5 or 10 years ago. If we want to know something about the status of the stocks so that we are convinced we know what we are talking about, then we have to be willing to spend a large amount of money to do that.

I am not talking about spending $1 million or $2 million a year. But as I said in testimony before the Senate hearing, we have to be willing to spend $5, $10, $20 million a year to really assess the abundance and status of the porpoise stock so you won't be arguing forever about what they are.

Thank you very much.

Mr. STUDDS. Mr. Burney?

Mr. BURNEY. With all due respect to Dr. Fox, and we go back a long way on this issue, it is easy to think that the mortality rate could be much higher if there isn't an observer on board.

The comparison that the IATTC made between their observers where there is no enforcement authority and when there are National Marine Fisheries observers, is certainly proof that this is not the case.

There is also the fact that most of the operators in our fleet have been subjected to observers on a number of trips. We had 95 percent observer coverage in 1987. This was supposed to set some sort of a standard for each one of these operators.

So you can go back and look at the record. Somebody with a very good record of releasing dolphin who all of a sudden does not have an observer is not going to turn his back on the economic incentive to release porpoise.

Mr. STUDDS. Mr. Hughes?

Mr. HUGHES. If I might throw in our support for the observation Dr. Fox made, again there are some strong practical reasons for as broad an observer coverage as you can get.

One of those reasons is fairness to captain and vessel owners who do their very best to avoid the mortalities. If there are some boats that are not operating as well, the only way in the big ocean to catch them and stop them from that practice is to have an observer there. I think that is very clear.

The affidavit, that I also read, about the U.S. observer who was serving the Tuna Commission at the time—even though he was there as an observer but with no enforcement powers, he observed a set on a pure set of protected dolphins. That is the kind of thing that does happen.

We are not saying every boat is bad, but if we are going to allow what is really an intentional taking of marine mammals, we have all agreed we want to do everything in our power to reduce the number of mortalities.

We strongly believe there will be a reduction in mortalities, if we can afford to put more observers on those boats.

Mr. STUDDS. Yes.

Mr. BRENNAN. Just to make sure we are clear on that, Mr. Chairman, a 50 percent observer coverage doesn't mean 50 percent of the boats are observed. It means all the boats are observed half the time.

We have a system for staggering the observers for various trips. But all of the skippers get to see an observer during the course of the year.

I guess I come out somewhere in the middle. I am not sure you can say that this proves that they act the same when they are observed and when they are not observed or it proves they act differently. I think you really don't know.

You have got to make some judgments and you have got to say is it worth the candle to spend all this money to put observers on board these vessels to make sure what we are now seeing 50 percent of the time happens 100 percent of the time.

Enforcement is a big problem for the National Marine and Fisheries Service. People are concerned about enforcement not only in this area, but in other fisheries, too.

We don't have the resources to spend attempting to gold-plate programs that are a sterling silver program to begin with.

Mr. STUDDS. We have come through a year, at least on a trial basis, you had something close to 100 percent coverage. Have you done an analysis of that yet?

Mr. BRENNAN. I don't want to speak about that definitively. I want to make sure the scientists are comfortable.

I think what I can say is that it looks like if we had 50 or 100 percent observers, it makes no difference.

That doesn't answer Dr. Fox's question. In that case we observed everyone.

We knew what everyone did.

Mr. STUDDS. Do you have any statement of how long it will take before comfortableness is attained?

Mr. BRENNAN. By the end of this year.

Mr. STUDDS. My impression is that the point Mr. Hughes and others are making is almost a more psychological one than statistical. We observed the phenomenon of driving and unaccountable slowing down and backing up ahead of us which remains unaccountable until we pass the police cruiser parked on the side of the road.

There is a psychological effect. I suspect that is the point.

Does anyone else want to speak to this point?

Mr. HUGHES. I won't draw too much of a conclusion from this, and I won't make the conclusion. I believe last year when there was the high observer coverage, the U.S. fleet had about 14,000 mortality. The previous year it exceeded quota. Whether there was a cause-effect relationship there, there are so many things that happen in the ocean.

I believe it is difficult to tell.

Mr. JOSEPH. The foreign fleet, too, Mr. Chairman. The foreign kill went down, too and it didn't have 100 percent observers.

Mr. BRENNAN. We started at the latter part of the year, the year before last, to have 100 percent observer coverage. As we were getting close to the quota, we wanted to make sure we were able to respond quickly. So we started to do 100 percent coverage. At the end of the year we said, "This would be a good thing. People have been asking about this 100 percent coverage business. Why not continue it for one year?" which ran into the next year.

We will have a time block of 100 percent coverage. Then maybe we can make these analyses that need to be done so we can come back with something based on reality. That is what we are doing.

Mr. STUDDS. No one suggested a correlation between this and the performance of the Red Sox?

Mr. BRENNAN. Not yet.

Mr. STUDDS. The question of sundown sets. There seems to be unanimity that there is higher death mortality of dolphins associated with sundown sets than other times of the day. Let us assume that the Congress is going to act to prohibit sundown sets. Easier said than done. How does one define it?

If one wanted to take, to rule out this particular time where we have substantially higher, unarguably higher mortality, how would we most wisely and rationally go about doing that? Is it a question of minutes or hours before sunset or is it more than that? Mr. Burney.

Mr. BURNEY. As we have stated on prior occasions, one of the things that we are very concerned with when it comes to sundown sets is the fact that the only difference between a, quote, "nighttime set"—let's get away from sundown, and daytime set is the visibility at the time that the porpoises are backed out of the net.

Once the porpoises are released you don't care how long it takes to get the fish on board the boat.

The concern has been addressed by continued experimentation. We tried different lights, placing them in different areas. We know that lighting is the major solution. If we can light the entire backdown channel to a degree commensurate with day light, we have eliminated the problem.

We are continuing to work on this. The industry looked at how to best approach sundown sets and we also started trying to design ways to get to backdown earlier. I mentioned snap rings, which we believe will cut substantial time off getting to backdown. Our estimates of completing backdown are in the neighborhood of 75 minutes.

There are 20 to 25 minutes of daylight after sundown. We therefore talked in terms of a 30 minute prohibition on sets before sundown. We looked at this on our own. We talked about a 30 minute prohibition, figuring we could knock 20 minutes off the time to backdown by the use of these snap rings, and the fact that there is 20 to 25 minutes of daylight left after sundown. We worked with this committee staff in terms of a 30 minute prohibition.

Obviously this has to be reexamined. If at the end of a year or two year period of 30 minute prohibition, we still have a high sundown mortality, then the prohibition has got to be reviewed and changes have to be made.

We thought this was a prudent, rational way to approach the issue of sundown sets and one that foreign fleets could not object to either.

We believe 30 minutes is fair and rational and should be subject to review after the data comes back.

Mr. STUDDS. Anyone else like to share wisdom on the subject?

Mr. HUGHES. Obviously, we feel 90 minutes is the minimum. We are basing that to a large extent on work NOAA did back as long ago as 1979 or 1980, where they have reviewed how long it takes to get through the backdown procedure—if everything goes well. If you have malfunctions, you are going to have sad situations. It is not a perfect world.

Even after backdown is completed, if it is dark at that point and you have not succeeded in eliminating all the dolphins from the purse, I think just about everyone agrees that getting those last dolphins out is difficult enough after backdown and it is virtually impossible at night.

The lights should help, et cetera. But we think that 90 minutes is the minimum, and we ought to start at that point rather than start 30 minutes before it is dark.

Mr. STUDDS. Dr. Fox.

Dr. FOX. I just want to comment that it is not simply a question of completing backdown, although that is a major part of it. The question is being able to see sufficiently well so that all the live animals have in fact been removed from the net before you begin to dry it up. There has to be sufficient light for that purpose.

There has to be sufficient light for the purpose of having sufficient time to deal with any problems that may occur during that porpoise release period, as Mr. Hughes suggested.

I don't have a particular number of minutes plus or minus official sunset. But I would think that if there is sufficient data in the National Marine Fisheries Service's files to look at that and come up with an appropriate number.

We are also concerned by the fact that with darkness it becomes also very difficult to estimate the number of animals that are actually killed as well as estimate or determine whether or not there are any live animals left in the net. In fact, the so-called night sets may result in, even though they do result in large kills, large kills being underestimated as well. There may be even a greater contribution to reducing the mortality to be achieved by working on this problem.

Mr. STUDDS. Mr. Brennan, it is your agency that has been created by several people here. What do you have to say?

Mr. **Brennan**. We did look at about 5500 sets which took place during 1982 to 1987. It appears that the average time from let go of net skiffs to backdown completion is about 90 minutes.

I think that Dr. Fox's comment is correct. After you finish backdown, you want to make sure that there are no live porpoises left in the net. That would be difficult to do in the dark.

Mr. **Studds**. Mr. Burney.

Mr. **Burney**. Just so the record is clear—I'm not trying to correct Mr. Brennan—but I believe the number he has been given is 90 minutes to completion of a set, which is different than 90 minutes to backdown completion. We did our own investigation and I thought that we were working with the regional director on this in terms of coming up with numbers that we found.

I was told they had found 90 minutes to completion of a set.

Mr. **Brennan**. I thought I said that.

Mr. **Burney**. You said to completion of backdown.

Mr. **Studds**. Why don't we restate that clearly?

Mr. **Brennan**. On the average 90 minutes from start of the set to the completion.

Mr. **Studds**. Where does that lead us in terms of what we might responsibly put in legislation?

Mr. **Burney**. It brings me back to the fact that—because we have the data base and we are the ones charged with the responsibility, we did the investigation ourselves. We felt that the average was 75 minutes from the time that the net skiff is released until the completion of backdown.

I would like to answer to Dr. Fox's statement in that regard; that the the removal of all live porpoises must be assured. We have a raft in the net to determine when all the live porpoises are removed.

I don't think any of us can say that there have not been instances where a live porpoise showed up later on because of climatic conditions or weather.

On the average, the completion of backdown takes 75 minutes. If you accept the argument that I have proposed, regarding the 30 minute prohibition, then you must accept the fact, that we can cut down 20 to 25 minutes off of the backdown time with the use of snap rings. If you also accept the fact that there is 20 to to 25 minutes of daylight after sundown, then 30 minutes is a satisfactory prohibition. This is a big move to legislate in this area. I would hate to see you arbitrarily cut about one-third of the fishing day out of this fleet without any rationale behind it. If need be, we are prepared to go through whatever review process the Department of Commerce deems necessary.

Mr. **Studds**. The difference between what you are suggesting and what Mr. Hughes is suggesting is about 15 minutes. How could that be a third of your day?

Mr. **Burney**. It is not. I think what Mr. Hughes is suggesting—and I will let him speak for himself—is that he would like to see all sets stopped 90 minutes before sundown.

Mr. **Studds**. Would that be a third of your day, even if that were the case?

Mr. **Burney**. Yes, a major component of our fishing time.

Mr. HUGHES. The release of net skiff . . . you can do that 90 minutes before sundown. In short, we are endorsing the option of starting the set 90 minutes before sundown, we are not saying you have to have it ended 90 minutes before sunset. That would be even safer.

I think we are talking about a 15 minute difference. We are basing it on, maybe NOAA has upgraded its statistical analysis. It took 80 minutes to end backdown. If everything goes well, and you can get every dolphin out of the net after backdown is over in the next 10 minutes, before dark falls, you have made it.

It truly is a minimum rather than some sort of number that has a lot of safety factor for the dolphins built in. I wouldn't want to see it cut to 30 minutes.

Mr. STUDDS. Dr. Fox.

Dr. FOX. One aspect of this I forgot to mention when I commented earlier is to caution against the focusing in on an average number. You have to remember that there is a a lot of dispersion around this average number, for example, if the average number turns out to be 75 minutes, you will probably find that there are sets that are completed as fast as 60 minutes but then there are probably sets that take hours.

Therefore, what we would recommend from the Commission's perspective is that not only average figures be examined but also the percentile of sets completed. A sufficiency long period is needed.

A period is needed to be able to cover 90 or 95 percent of the sets.

Mr. STUDDS. It would drive everyone stark raving mad if you try to solve this within the next five minutes. Maybe we can do it backwards, you have all got to be done by—you know the instincts around here, if you keep up arguing 75 versus 90, you will end up with 82 and a half.

Let's go on to the question of performance standards. I gather, tell me if I'm wrong, that there is a substantial variance among captains and vessels and performance average overall; not talking about acts of God or expected storms. But just on the average, there are relatively good performers and there are relatively bad performers. Is that an accurate statement?

Mr. BURNEY. There is a difference in the performance level between those at the top and those at the bottom.

Mr. STUDDS. I think I said that.

Mr. BURNEY. I hate the word bad.

Mr. STUDDS. Less adequate. Do we know who the relatively less adequate performers are?

Mr. BRENNAN. I don't think we have attempted to identify them officially.

Mr. STUDDS. I didn't mean officially. I have to be so careful what I say. Do we officially have suspicions as to who the less adequate performers might be?

Mr. BRENNAN. I would say yes we do have some suspicions. We can look at some data perhaps. In fact, we already have a system, if there is an unusually large kill. We have the expert skippers' panel who review the data and look at it and see from their perspective what was the cause for it. And they counsel with the skipper in an attempt to make sure that it doesn't happen in the future.

Mr. **Studds**. If perchance we were to require to set and to enforce performance standards, it would not be beyond the realm of your capability to do so?

Mr. **Brennan**. No. Working with the industry and the concerned environmental community, I think we would come up with standards. It would not be something we would do overnight. It is not our policy to do that.

Mr. **Studds**. Anyone else want to speak to this subject. Mr. Burney.

Mr. **Burney**. Just briefly. We have found that people can benefit through counseling. We have seen improvement with those we have counseled. We hope as the staff draft seems to indicate, that any performance standard program is, at least that I last reviewed had, is based on flexibility.

Mr. **Studds**. The staff works faster than the executive agencies occasionally.

Mr. **Burney**. Sometimes that happens. I do feel there is enough flexibility in the staff draft to give us the opportunity to continue counseling these people for improvement. It is necessary.

Mr. **Studds**. Mr. Hughes.

Mr. **Hughes**. At some point, however, in the counseling process a decision does need to be made by NOAA on decertifying a captain or vessel.

It is also very important that the performance standards be established in such a way that the system works with the expert skipper's panel being energized more than it has been used in the past.

We think it will have an effect on some of the foreign fleets not already using those techniques. In order to achieve comparability, they will have things to look at other than just rate of kill if some of those things are added to the U.S. program.

Mr. **Studds**. Let's go to the question of comparability for a moment. The National Marine Fisheries Service has issued regulations which require immediate comparability in regulatory programs, but which allow foreign fleets until the end of 1990, two more years to be comparable in terms of their kill rate.

Mr. Hughes suggested we need comparability in all aspects. We have a staff discussion here. I'll see what you react to.

The current ratio, as I understand it, of the kill rate of foreign fisherman is about four or five to one, about four or five times higher than ours. What would be the reaction of the various members of the panel to the discussion that we not wait the full 2 years as suggested by the current regulations promulgated by the fishery service, but require some interim accountability by requiring that average performance be improved next year, from four or five times to twice and then comparability in the next year.

We require them to get all the way down to no more than twice our kill rate in the first year. Is that logical?

Mr. **Brennan**. It is certainly logical. It is certainly feasible. We have had several comments on our regulations which were issued as interim final regulations. That is the situation we are focusing on, I'm happy to say, Mr. Chairman.

We may shortly come out with final regulations which incorporate that thought. We have been listening to what staff has been saying.

Mr. STUDDS. Final regulations presumably are something like dire urgent supplementals.

Mr. BRENNAN. They are the successor to interim final regulations.

Mr. STUDDS. Dr. Joseph.

Mr. JOSEPH. Mr. Chairman, thank you. I have already commented on that earlier in my testimony. Obviously the United States should take whatever lead in setting standards that it sees fit. But it has to be aware of the difficulties in other countries of achieving those standards. They are making progress.

I think if we have a 2.0 standard by the end of 1989, we are going to lose some of the countries. As you have already indicated, the kill rate of the other countries is substantially on the average higher than the U.S. kill. So I would be in favor of no milestone there at all, but of leaving the 1.25 standard to at least until 1992. I think the other countries really expected, Mr. Chairman, to have more time than the end of 1990, because when they were originally approached on this subject, they were thinking in terms of 5 years that they had to work.

Even at the end of 1990, if we have no milestone, we may lose some of the countries.

Mr. STUDDS. Are you any more sanguine about the ability of those countries to meet comparability in 2 years?

Mr. JOSEPH. Two years is a lot better, yes. I am more optimistic that we can do something in 2 years. I'm not saying we can resolve all of the problems and all of the countries are going to be able to come into compliance.

Mr. STUDDS. Presumably if they are going to be close to that in 2 years, they will be on their way after 1 year?

Mr. JOSEPH. How rapidly they will, I don't know, Mr. Chairman. If they think a standard of 2.0 or something like that in a year is unachievable, they may throw in the towel right now. There is some indication that maybe one country has done that, Mr. Chairman.

Mr. STUDDS. Anybody else want to speak to this question? Mr. Hughes.

Mr. HUGHES. The environmental community thought Congress had already said comparability was required some time ago. If we are finally going to make it a requirement right now, we would certainly support that.

I think Mr. Brennan's notion that the final regulations may embrace this aspect is encouraging to us.

Mr. STUDDS. Very quickly, on the question of the possible third party intermediary shipments of tuna to the United States in the event we would ban the importation from a particular country which did not achieve comparability, does anyone have a reaction to a suggestion that we might strengthen this legislation by forbidding the import of tuna from an intermediary nation which might deal with a country that does not achieve comparability?

Dr. FOX. If you are going to make the program work, you would definitely have to have provisions for dealing with third parties.

Mr. **Brennan**. Mr. Chairman, we did have a couple of comments on our interim final rule suggesting there be some sort of certification by a country sending in canned tuna indicating the country of origin, in effect, when the tuna had been caught.

I believe, that it is possible to require that kind of certification. In fact, the information is available. We are looking very closely at that.

Mr. **Studds**. Mr. Hughes.

Mr. **Hughes**. In working with the staff to try to find exactly the right way to do that, one of the notions discussed is to make it clear that the intermediary nation would be prohibited from exporting any tuna, not just the yellowfin tuna, but any of its tuna in trade would be cut off if it continued to take imports of yellowfin caught on dolphin from a nation that did not meet the comparability standards.

Mr. **Studds**. We are coming to summary time. I am about to reach the conclusion that other members have been waylaid.

I am going to give each of you a chance if you wish to offer a summary piece of advice, an interim final piece of advice to the subcommittee. Let me just ask another question.

Mr. Hughes, as I have listened as best I could to what everyone has had to say, it seems to me that what accounts, the principal difference between your position and the other members of the panel is a different set of assumptions about what consequences would flow from the imposition of a zero quota in say 4 years by the United States. You are assuming the United States has sufficient leverage given the magnitude of our market that like it or not both the United States and foreign fleets would find a way given that economic incentive to somehow comply within the 4 years.

The other members of the panel are saying as best they can estimate or project or predict given their experience and their knowledge, that there is no likely manner in which either the United States or the foreign fleets can literally comply with that, no matter how much they might wish to, or therefore the U.S. fleet would go elsewhere or go out of business.

The result would be devastating or worse for the dolphins.

One of my questions, Mr. Hughes, is if you were to accept the premise of the other panel members, the consequence of going to zero over four years, would you still hold that position or suggest some other approach? That the foreign fleet could not comply and would feel free of any constraints?

Mr. **Hughes**. I think we have reached the point where we feel that everything points in the direction of, in fact, the consequence that we predict; that even if it does not, the United States, in what will be 20 years after the original enactment of the Marine Mammal Protection Act should finally say no more mortality of dolphins, that we will not accept tuna that is caught that way.

We think the European economic community will join us in that. We are not the only people in the world who find it abhorrent that we continue to kill this number of marine mammals.

So I think we have come to the point where we believe that a zero kill has to be established for the porpoise just as it has for all the marine mammals covered by the act.

Mr. **Studds**. Let me try again. If you were to concur in the assumptions of the other panel members who disagree with you on this question, but if it turns out you were convinced they were right that the consequence of going to zero over four years would be that we would simply have foreign vessels continue to fish but find other markets.

And the consequences of that would be the dolphin mortality would be the same or higher. If they are correct in that assumption, would you nonetheless for ethical or other reasons prefer that the United States reduce the quota to zero regardless of the consequences?

Mr. **Hughes**. I think the way I would handle that is reduce it to zero and find out if those consequences occur. And at that point Congress can make the necessary adjustment. I don't see any value in predicting such a thing and in continuing to allow the kill, which is in excess of 100,000 dolphins a year for the last two years.

I think we can take those steps if it does prove to be the case that a massive fleet fishing on dolphin appears——

Mr. **Studds**. What about the current foreign fleet?

Mr. **Hughes**. I think we adjust it then. I think everything suggests that they are going to try to stay in this market. I think Mexico's behavior of late certainly suggests that. I think some of the excellent work that the Tuna Commission is doing not only with us, but with all the other fishing fleets will bear fruit.

Some of those countries who may not be able to stay in our market this year because they have not been able to certify will, in fact, get there, improve their performance and come back into our market.

Mr. **Studds**. I think we have now gotten to the point where the central issues, both major and minor, at least have been defined if not resolved. It is clear what the major questions before us are. Let me go back to where I was this morning. Assuming we all share the same general goal here, which is to take that, which is most likely to result in a minimization of the amount of dolphins killed in the pursuit of tuna, let me give each of you a chance to make a final summary statement, or interim final summary statement, if you wish, in whatever order you would like to go.

Mr. **Brennan**. Mr. Chairman, I would point out that the FAO has made a report which indicated by the year 2000 there is going to be a shortfall of about 20 percent in the amount of wild fish available to satisfy the predicted markets. That report was written in the context of looking at alternatives for aquaculture. Given that shortfall, it is very unlikely that all nations are going to forego this resource because there is no market in the United States or perhaps even if there is no market in the United States or Europe.

I would counsel to go extremely slowly. Moving precipitously. That could lead to a situation where the dolphins are not helped, and also could put ourselves into a situation where we take one step internationally and then, when we find it doesn't work, we must again amend the law and go back to our friends and say, "we didn't mean it." We have got to allow some porpoise kill because the other way doesn't work.

Internationally, it would make us look like we are not acting in a considered fashion. I think it would be inappropriate to take that step.

Mr. STUDDS. The rest of you, last best piece of counsel to this subcommittee. Who wants to go next?

Dr. Fox.

Dr. FOX. Thank you, Mr. Chairman. What needs to happen is that the industry and the government need to start working together again, hand in hand. You have to get the energy back in the program that Mr. Hughes talked about. I think that the United States' program can result in a reduction in its kill. It is technologically feasible to do so. However, we are only talking about thousands of animals by the U.S. fleet. Working hand in hand to reduce the mortality through technological feasibility, on the other hand, may have an impact on foreign fleets on the order of tens of thousands of animals.

We need to support the program of the Inter-American Tropical Tuna Commission because it is through their involvement working with the foreign governments that we have the greatest opportunity to reduce the foreign mortality, provided that the United States sets proper standards for its people and attempts appropriately to hold others to those same standards.

Mr. STUDDS. Who is next?

Dr. Joseph.

Mr. JOSEPH. Thank you, Mr. Chairman. I am going to repeat myself almost ad nauseum. I would respect whatever action you are going to take with respect to keeping the foreign fleet active in the program we now have. We are making progress. Give us a chance to continue that, give us a chance to work with the international fleet. I say that knowing that it has taken a long time to get where we are.

Thank you, Mr. Chairman.

Mr. STUDDS. Mr. Hughes, Mr. Burney, you want to see who has the last in the ultimate word.

Mr. BURNEY. I don't mind going first because I don't think there is much that can be said to discredit my remarks.

What we have to focus on is where we are today and where we were in 1984. We knew in 1984 that we had a serious discrepancy between what the U.S. fleet could accomplish and what foreign fleets were doing. Congress said, let's resolve this foreign fleet issue. Let's do something dramatic and get the foreign fleet porpoise mortality down.

It hasn't been done. Through no fault of anyone actually, because it is a difficult issue. It was difficult to promulgate regulations that would also keep foreign fleets involved in the process.

I am disturbed that so much attention is focused on the U.S. fleet, as if they have done nothing over the last four years. We have accomplished a great deal. I have attached a graph that shows that the mortality rate per ton of fish caught has gone down. I have described all the things that we tried that didn't work and all of the things we are now attempting to do that hold out good possibilities in the future.

If it is true that this is an international problem and if, as has been stated earlier by Mr. Hughes that the EEC will go along with a regulatory program, let's see what the EEC does. Let's focus all of our attention on the EEC and ask them what they are going to do. If they take action, let's pattern our action after theirs.

The truth is, this is the only country that addresses this issue. It has been addressed through our industry in a very responsible manner. Whatever action you take, I ask you to be careful. Don't make us non-competitive. Don't take the one major industry that has reduced the mortality and burden them to such an extent that they are no longer a competitor with the foreign nations that we now seek to regulate.

Mr. STUDDS. Mr. Hughes.

Mr. HUGHES. We certainly appreciate your leadership on this issue, Mr. Chairman. I appreciate the efforts that the staff members of this committee have made to find some solutions to some of the problems we have been discussing here today.

We believe, as Mr. Burney does, that the U.S. is the leader in this area and must be. I don't think we can wait for the European community. I think we have to show the way. The United States has got a number of improvements that it can make in how it is handling its own program.

We have discussed those here today. We think that those program improvements will provide a direct touchstone for comparability for those foreign countries, give them some concrete methods and procedures and practices to adopt to assure that they begin to reduce substantially their taking of dolphins.

In the final analysis, we believe that after this many years it is time to set a clear goal-return in reality to the clear goals of the Marine Mammal Protection Act so that instead of everyone trying to get down to 20,500 or whatever they calculate their proportional comparability share of such number would be in the foreign fleet, that everyone recognize that we simply have to find a way to catch tuna without killing dolphin. Let's work toward that with a reasonable phase-in period to achieve it.

Thank you very much.

Mr. STUDDS. I want to thank all of you. It has been a long hearing. I must say this ranks fairly high in terms of the comprehensiveness and helpfulness, I think, to the subcommittee. If there are issues we have not explored, they have alluded us all together.

I think we know certainly the problems we need to address.

The subcommittee will meet to mark up the bill next week.

I want to thank you. Some of you came a long way. Some of you may be quite in a hurry to go somewhere. We thank you for your patience. We look forward to working with you.

The subcommittee is adjourned.

[Whereupon, at 1:05 p.m., the subcommittee was adjourned.]

[The following was submitted for the record:]

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September 1, 1988

BACKGROUND MEMORANDUM

TO: Members, Subcommittee on Fisheries and Wildlife Conservation and the Environment

FROM: Subcommittee Staff

RE: Oversight hearing on the issue of minimizing the take of dolphins in the course of fishing for yellowfin tuna in the eastern tropical Pacific ocean.

On September 8, 1988 at 10:00 a.m. the Subcommittee on Fisheries and Wildlife Conservation and the Environment will hold a hearing on the subject of reducing the mortality and serious injury of dolphins in the course of yellowfin tuna fishing in the eastern tropical Pacific Ocean. This will be the second of two hearings the Subcommittee has held on the reauthorization of the Marine Mammal Protection Act (MMPA). The Subcommittee intends to mark-up H.R. 4189, a bill to reauthorize the MMPA, on September 14, 1988.

BACKGROUND: COMMERCIAL FISHING AND THE MMPA

In 1972 the MMPA was enacted for the purpose of maintaining healthy populations of marine mammals. The Act established a moratorium on the taking of marine mammals, although it allowed the incidental taking of marine mammals in the course of commercial fishing. In order to minimize the impact of commercial fishing on the populations of marine mammals, the Act directed the Secretary of Commerce to establish a permit system and issue regulations which would ensure that the techniques and equipment used by fishermen would produce the least practicable hazard to marine mammals. As originally stated in 1972 (section

101), it shall be the immediate goal that the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate.

The 1972 statute also directed the Secretary of Treasury to ban the importation of commercial fish or fish products that have been caught with commercial fishing technology which results in the incidental kill or incidental serious injury of marine mammals in excess of United States standards. The Act required the Secretary of Commerce to obtain reasonable proof from foreign governments in order to make a finding that foreign commercial fishing techniques were not resulting in kills or injuries in excess of U.S. standards.

TUNA/PORPOISE CONFLICTS

Historically, the tuna/porpoise conflicts have given rise to some of the most controversial issues relating to the MMPA. For 30 years, purse seining has been an effective method of catching yellowfin tuna in the eastern tropical Pacific Ocean (ETP). In the ETP, unlike other areas, yellowfin tuna swim beneath schools of porpoise or dolphins.

In order to catch these valuable tuna, fishermen encircle schools of porpoise with a seine net and, in the process, many porpoise become seriously injured or killed. The attached table illustrates historical levels of mortality and serious injury by domestic and foreign fishermen. The most current data show that in 1987, 60 percent of the tuna caught and more than 80 percent of the porpoise killed in the ETP are being taken by foreign purse seiners.

In addition to the United States, approximately 18 other nations have purse seined in the ETP for yellowfin tuna. In order for these countries to import tuna into the U.S., the Secretary of Commerce, in accordance with sec. 101, is required to make a finding that the fishermen from these countries are using techniques and equipment that prevents mortalities of marine mammals in excess of U.S. standards. The Congo, El Salvador, Mexico, Peru, Senegal and the U.S.S.R. have been prohibited from exporting yellowfin tuna to the U.S. during some period of time since the MMPA was enacted because they did not meet U.S. standards. Other countries such as Canada, New Zealand, Bermuda and the Republic of Korea have stopped fishing in the ETP altogether. Currently findings are in effect for the Cayman Islands, Costa Rica, Equador, Mexico, Panama, Spain, Vanuatu and Venezuela. These are therefore the only countries fishing for yellowfin tuna in the ETP allowed to export yellowfin to the U.S.

1981 AMENDMENTS

In the 97th Congress, the MMPA was reauthorized and, in the process, the Fish and Wildlife Subcommittee, closely examined the tuna/porpoise issue. The Committee report (Rpt. No. 97-228) discusses the success of the Act in reducing the mortality of porpoise caused by domestic fishermen from 368,000 in 1972 to 18,573 in 1980. It was noted that the dramatic reduction was accomplished through improvements in gear design and fishing techniques. The report also discusses the conflicting opinions that the goal of the Act was not being fulfilled because the incidental kill of porpoise was not being reduced to insignificant levels approaching zero. The tuna industry contended that by using the best technologically feasible equipment and methods to reduce incidental porpoise mortality, the industry was meeting the mandate of the Act.

In 1981, the Congress approved amendments which stated that the goal of the Act would be satisfied in the case of purse seining fishing for yellowfin tuna by the application of the best marine mammal safety techniques and equipment that are economically and technologically practicable. The Committee report stated that the existing goal of the Act could properly be used to stimulate new technology for reducing the incidental taking of marine mammals. To ensure that efforts to discover new technology would be undertaken, Congress adopted a provision which directed the Secretary to undertake a program of, and provide financial assistance for, research into new methods of locating and catching yellowfin tuna without the incidental taking of marine mammals.

1984 AMENDMENTS

The 98th Congress approved legislation to reauthorize the MMPA and made further amendments to those sections of the Act concerning yellowfin tuna and porpoise mortalities. One of the most significant changes was to strengthen sec. 102(a), which ensures that nations exporting to the U.S. yellowfin tuna harvested with purse seines in the ETP have an adequate marine mammal protection program. The 1984 amendments directed the Secretary to require documentary evidence from foreign governments that they have adopted regulatory programs governing the incidental taking of marine mammals that are comparable to that of the U.S. Further, the amendments required this documentation to include proof that the average rate of incidental taking of marine mammals was comparable to that of the U.S.

The 1984 amendments also statutorily extended the general permit issued to the American Tunaboat Association (ATA) for an indefinite period, subject to a number of specific conditions. These conditions included changes in fishing gear, techniques and practices if required by the Secretary. Also, in order to protect the coastal spotted and eastern spinner dolphins, quotas of 250 and 2,750 respectively, were incorporated into the law. Further, the amendments required that, unlike past practice, mortalities of these species be within, not in addition to, the overall annual quota established by the Secretary and incorporated into the permit. If either of these subquotas is exceeded, even if the overall quota had not been reached, fishing in the ETP would be terminated.

During reauthorization hearings held in 1984, it became apparent that the National Marine Fisheries Service did not have the necessary data on which to base calculations necessary for determining the impact of porpoise mortality on the populations of different stocks. In order to obtain this information, the Act was amended to direct the Secretary of Commerce to carry out a scientific research program to monitor, for at least five years, population abundance and trends for ETP stocks of porpoise. The purpose of the 5 year program is to provide the basis for determining if porpoise are being adversely affected by incidental takes.

Finally and in recognition of the information expected from the 5 year study, the Act was amended to direct the Secretary to make appropriate modifications to the incidental take quotas and other requirements of the ATA general permit, if it is determined that the existing incidental take is having a significant adverse effect on a marine mammal population.

ISSUES

Comparability - The 1984 amendments required foreign fishermen fishing for yellowfin tuna in the ETP be comparable to U.S. fishermen in terms of their regulatory programs and average rate of incidental take. Unfortunately, the interim final regulations implementing these provisions were just recently published on March 18, 1988 and went into effect in April. The regulations require that any nation wishing to export yellowfin from the ETP tuna into the U.S. must satisfy the two-part comparability test. However, while the comparable regulatory program test(including observers) became effective immediately, the application of the mortality rate test will be delayed until 1991 when adequate data is be available to allow a meaningful comparison. While these regulations are still under review, questions have been raised about the length of time provided to foreign nations to reach a comparable mortality rate as well as the amount of time it has taken the agency to issue the regulations. To what extent have these delays prevented the goals of the Act from being achieved and what are the likely effects of these new regulations? Which countries will not achieve comparability and consequently will be prohibited from exporting yellowfin tuna to the U.S.? How will these regulations affect the overall mortality of porpoise?

Observer Coverage - The environmental community is requesting that the Act be amended to require 100% observer coverage of all purse seine vessels fishing for yellowfin in the ETP. In 1987 the U.S. fleet experienced 95% observer coverage and the NMFS estimates that for 1988 the coverage will be about 50%. One of the reasons for the increased coverage in 1987 was to assess the effectiveness of the observer program. The NMFS analysis of this program was scheduled to be completed this summer so that improvements, if necessary, could be made to the program for the 1989 season. What is the level of coverage necessary in order to obtain satistically reliable information? Has NMFS discovered any observer effect and what impact has this had on the tuna fishermen? What are the costs and benefits associated with 50% and 100% coverage?

Sundown Sets - The environmental community is also seeking a ban on the setting of purse seine nets during sundown. During the sundown hour, tuna are know to school in large numbers with porpoise. Fishermen have found this time of day to be the most productive. Unfortunately, the kill rate of porpoise is also highest during this time in part because fishermen can not see the porpoise to release them during backdown procedures. Are there existing technologies which would help reduce the high mortality rate or is prohibiting fishing during sundown the only effective method? If sundown sets were banned, how long before actual sundown should fishing be curtailed in order to prevent high mortality rates? What would be the impact on the tuna industry if sundown sets were banned?

Phase-Out of Quota - The overall quota for the ATA general permit has been 20,500 since 1981. Since 1981 the U.S. fleet has exceeded the quota twice, however, the average mortality over the past 7 years has been 15% below the quota. The environmental community is seeking a four year phase-out of the U.S. quota which would require that no marine mammals may be taken in 1992 or thereafter. According to the current requirements of the Act concerning comparability, foreign nations would also be required to have a comparable mortality rate or face an embargo. What would be the effects on the domestic industry if a phase-out were adopted? How would foreign nations react to these new requirements and would they continue to make progress in reducing mortality? What would be the consequences on overall mortality of porpoise if such a scheme were adopted?

New Fishing Techniques - The 1981 amendments called upon the Secretary of Commerce to undertake and support research into new methods of locating and catching yellowfin tuna without the incidental taking of marine mammals. What research has been done since 1981, how successful has this research been and what are the future plans for additional research? Is it realistic to expect that a new technology will be developed in the near future?

Five Year Population Study - The 1984 amendments required the National Marine Fisheries Service to undertake a five year research program to assess porpoise stocks which are impacted by the tuna purse seine fishery. What research activities have been undertaken and what does the data indicate is the health of individual stocks of porpoise? When will the research be completed [and what will be revealed about the different populations when the study is completed?]

Dolphin mortality for US and non-US tuna purse seining vessels.

YEAR	US VESSELS	NON-US VESSELS	TOTAL
1959	N/A	N/A	55,000
1960	N/A	N/A	478,000
1961	N/A	N/A	534,000
1962	N/A	N/A	216,000
1963	N/A	N/A	240,000
1964	N/A	N/A	390,000
1965	N/A	N/A	460,000
1966	N/A	N/A	374,000
1967	N/A	N/A	257,000
1968	N/A	N/A	229,000
1969	N/A	N/A	461,000
1970	N/A	N/A	467,000
1971	246,213	15,715	261,928
1972	368,600	55,078	423,678
1973	206,697	58,276	264,973
1974	147,437	27,245	174,682
1975	166,645	27,812	194,457
1976	108,740	19,482	128,222
1977	25,452	25,901	51,353
1978	19,366	11,147	30,513
1979	17,938	6,837	24,775
1980	18,573	30,978	49,551
1981	18,520	16,516	35,036
1982	28,194	4,210	32,404
1983	9,559	N/A	N/A
1984	17,688	[23,059]	40,747
1985	19,205	[37,505]	56,710
1986	20,692	[103,905]	124,597
1987	13,992	115,000	128,992

TESTIMONY OF
WILLIAM P. EVANS
UNDER SECRETARY FOR
OCEANS AND ATMOSPHERE
DEPARTMENT OF COMMERCE

BEFORE THE

SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT
COMMITTEE ON MERCHANT MARINE AND FISHERIES
HOUSE OF REPRESENTATIVES

SEPTEMBER 8, 1988

Mr. Chairman and Members of the Subcommittee:

I am James W. Brennan, Assistant Administrator for Fisheries of the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA). I am here today to present testimony on behalf of Under Secretary Evans who is out of the country. With me today is Mr. Carmen J. Blondin, Deputy Assistant Secretary for International Interests.

In 1984, the U.S. Congress amended the MMPA to extend the general permit held by the American Tunaboat Association and to continue the quota on the taking of 20,500 porpoise per year in the eastern tropical Pacific Ocean (ETP). This allows the U.S. tuna fleet to continue fishing for yellowfin tuna in association with porpoise stocks, as long as they continue to use the best marine mammal safety techniques and equipment that are economically and technologically practicable. The 1984 amendments also required

NOAA to undertake a five-year assessment of the affected porpoise stocks. This assessment has been underway since 1986. Besides using data collected on research vessels, NOAA is developing statistical methods to use information collected by National Marine Fisheries Service (NMFS) observers onboard tuna vessels to monitor changes in the relative abundance of the stocks. In 1991, NOAA will make known the assessment on whether the stocks of porpoise affected by the multi-national tuna fishery are increasing, decreasing or stable.

The U.S. tuna industry has remained below its 20,500 quota every year since the Act was amended in 1984, except for 1986 when the quota was reached in October. We are, however, quite concerned over porpoise mortality in the foreign segment of this fishery. Data provided by the Inter-American Tropical Tuna Commission (IATTC) show incidental take levels for the last four years were:

Year	U.S. Vessels	Non-U.S. Vessels	Total
1984	17,732	15,018	32,750
1985	19,205	36,032	55,297
1986	20,692	103,905	124,597
1987[1]	13,992	101,036	115,028

1/ Preliminary IATTC Data

Comparability

In March, NOAA published interim final regulations governing the importation of yellowfin tuna that we believe will greatly assist us in meeting the intent of the 1984 amendments by saving porpoise and reducing mortality. These regulations, unfortunately took a long time to develop. We are not proud of this. However, in developing these regulations, the problem we faced was to establish requirements strict enough to immediately begin the reduction of porpoise mortality without causing foreign nations to attempt to develop alternative markets for tuna and allowing them to continue to fish for yellowfin tuna without regard to porpoise mortality. The regulations require an observer program to monitor and report porpoise mortality, an annual certification program to ensure comparability with U.S. requirements for protecting porpoise, and a test to determine if a nation's marine mammal kill rate is comparable to that of the U.S. Specifically, foreign nations purse seining in the ETP and wishing to export yellowfin tuna to the United States must prove to us that they have laws and regulations designed to protect porpoise. The required porpoise-saving procedures and gear must be comparable to those of the United States.

As of today, only Mexico has submitted any documentation. While a review of its submissions is underway, it can continue to export yellowfin to the U.S. The remaining purse seine fishing nations (El Salvador, Panama, Spain, Vanuatu, Ecuador, the Cayman Islands, and Venezuela) will be prohibited from exporting yellowfin tuna to the U.S. effective October 15, 1988.

In addition to laws and regulations, each nation must submit to NMFS observer data collected on porpoise mortality. The Congressional staff 1988 MMPA draft amendments require that, starting next year, annual mortality rates must show improvement to remain "comparable". This declining trend in mortality must continue so that by the end of 1989 a foreign kill rate must be no greater than twice the U.S. rate. By the end of 1990 a foreign kill rate must be no greater than 25 percent above the U.S. rate. We believe requiring a gradually declining mortality rate is a reasonable means of implementing the amendments.

We believe the most effective way to reduce porpoise mortality by all nations is through an international program among nations fishing for tuna associated with porpoise. Currently, the IATTC is an effective partner in an international porpoise research program to reduce porpoise mortality in the ETP. Their observer program currently provides the only source of scientific estimates of porpoise mortality for the international fleet. We will continue our cooperation and support for this international program in an effort to further reduce non-U.S. porpoise mortality. ①

Observer Coverage

Since at least 1977, we have been encouraged to require 100 percent observer coverage on U.S. tuna vessels to ensure the use of porpoise safety gear and techniques. We continue to believe that providing 100 percent coverage is both expensive and excessive. Based on gear inspections and discussions with observers, we believe that porpoise rescue procedures are followed substantially even on unobserved trips. According to our statisticians, total mortality can be estimated for the fleet from a sample size of 33 percent.

Sundown Sets

The 1984 amendments to the MMPA provided for changing those regulations which covered details of gear and technique practices to guidelines. In 1986, NOAA issued these guidelines which deleted the prohibition on sundown sets but required all certificate holders to install and use high-power lights to reduce the higher rate of mortality associated with sundown sets. We had hoped that the alternate lighting systems with 1,000 watt, hi-pressure sodium vapor lights with 140,000 lumen output would be effective in reducing problems associated with sundown sets and crew safety in releasing porpoise. We stated in 1986 that after two years we would evaluate the effectiveness of these lights in reducing porpoise mortality and will consider the need for new gear or procedural regulations, including the possible reimposition of the sundown set prohibition at that time. We have now completed the data collection part of that two year program and will soon complete and release both an analysis of the data and a recommended course of action.

If we impose a sundown set ban on our fleet, we would require a foreign nation to have a similar ban in order to have a comparable program.

Phase-Out of the U.S. Quota Over Four Years

While we concur with the goal of reducing dolphin mortality, we do not believe that reducing the U.S. dolphin mortality quota to zero will necessarily result in more protection for the porpoise. We fear that reducing the quota to zero, which could effectively prohibit purse seine fishing on dolphins to catch tuna, would be counterproductive. While some of the U.S. fleet would probably move to the western Pacific to catch tuna, and some would be restricted to fishing for school fish, some would probably change to foreign flags. Purse seine fishing on dolphins is the most efficient way to catch large yellowfin tuna and we doubt this method will be abandoned by all nations fishing in the ETP unless other satisfactory fishing methods can be developed. Foreign fleets outside of our direct control might increase their efforts and thus have an even greater impact on the dolphins.

We agree with others who see an increased emphasis on research. For example, understanding of the bond that holds the porpoise and yellowfin tuna together could lead to either breaking or working around that bond. In the meantime, we should strive to improve present fishing techniques and gear and assess new approaches. NOAA's Southwest Fisheries Center plans to hold a workshop, scheduled for October, to look at modifications of gear and technique and alternative methods that have been suggested as means of reducing dolphin mortality in this fishery.

Skipper Performance Standards

In 1986, the overall annual porpoise quota of 20,500 was reached in October and the U.S. tuna purse seine fleet was prohibited from fishing for tuna associated with marine mammals for the remainder of the year. It was suggested that the quota was reached because a small number of vessels, with operators lacking skill or motivation, had exceptionally high porpoise mortality rates. This view is supported by the fact that while almost 60 percent of all porpoise sets result in zero mortality, disaster sets consisting of only 6 percent of all sets on porpoise, result in over 72 percent of all observed mortality.

While we do not currently have performance standards, we are working with the tuna industry to develop them. Such standards would enable us to identify poor performers for remedial action or for removal from the fishery. Standards would also reward good performers by ensuring their ability to fish throughout the year.

Conclusion

Mr. Chairman, in conclusion I believe that any precipitous attempt to reduce the dolphin mortality rate in this fishery to zero, without the backing of sound science, could backfire and actually lessen our ability to provide protection for these animals.

I thank the subcommittee for this opportunity to express the views of the Department, and will try to answer any questions you may have.

TESTIMONY OF

AMERICAN CETACEAN SOCIETY
AMERICAN HUMANE ASSOCIATION
ANIMAL PROTECTIVE INSTITUTE
CALIFORNIA MARINE MAMMAL CENTER
CENTER FOR ENVIRONMENTAL EDUCATION
CETACEAN SOCIETY INTERNATIONAL
COMMITTEE FOR HUMANE LEGISLATION/FRIENDS OF ANIMALS
EARTH ISLAND INSTITUTE
GREENPEACE
THE HUMANE SOCIETY OF THE UNITED STATES
INTERNATIONAL FUND FOR ANIMAL WELFARE
INTERNATIONAL WILDLIFE COALITION
MARINE MAMMAL FUND
NATIONAL ALLIANCE FOR ANIMAL LEGISLATION
NATIONAL AUDUBON SOCIETY
SIERRA CLUB
SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION
TENTH DISTRICT DOLPHIN PROJECT
WHALE CENTER
THE WILDLIFE CENTER OF CALIFORNIA

FOR THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT
OF THE COMMITTEE ON MERCHANT MARINE AND FISHERIES

ON H.R. 4189
THE REAUTHORIZATION OF THE MARINE MAMMAL PROTECTION ACT

SEPTEMBER 8, 1988

PRESENTED BY
VANCE HUGHES

Mr. Chairman and Members of the Subcommittee:

This testimony is presented on behalf of the following groups: American Cetacean Society, American Humane Association, Animal Protection Institute, California Marine Mammal Center, Center for Environmental Education,Cetacean Society International, Committee for Humane Legislation/Friends of Animals, Earth Island Institute, Greenpeace, The Humane Society of the United States, International Fund for Animal Welfare, International Wildlife Coalition, Marine Mammal Fund, National Alliance for Animal Legislation, National Audubon Society, Society for Animal Protective Legislation, Sierra Club, Society for Animal Protective Legislation, Tenth District Dolphin Project, Whale Center, Wildlife Center of California.

We appreciate the opportunity to address an issue which has eluded satisfactory resolution since the original passage of the Marine Mammal Protection Act (MMPA)--the need for a reduction in dolphin mortalities in the tuna fisheries in the Eastern Tropical Pacific (ETP). Indeed, broad based concern for dolphins provided the major initial impetus for the Act.

We thank you, Mr. Chairman for your leadership on this issue. We greatly appreciate the fact that the subcommittee has asked that we focus on solutions to the problem rather than on whether or not a problem exists. We commend this subcommittee's commitment to enacting a real solution after 16 years of experimentation which has, in the final analysis, failed to solve the dolphin mortality problem.

In our testimony submitted for the hearing on May 10, 1988, we documented the parameters of the problem; therefore, we will not repeat that information. Two additional bits of information have become available since then, however. The Inter American Tropical Tuna Commission (IATTC) updated its preliminary estimate of dolphin mortalities for 1987. Their data now indicate that up to 115,000 animals may have been killed in the combined fisheries. For the second year in a row, in excess of 100,000 dolphins have died in this fishery, and we believe that such figures which are minimum estimates lend an urgency to this issue.

Second, the United States presented preliminary data from the abundance and trends study to the Small Cetacean Subcommittee of the Scientific Committee of the International Whaling Commission (IWC). Although the coefficient of variation is larger than desirable, the study presented some startling data as to the abundance of particular stocks. It is possible that virtually every target stock in the ETP is severely depleted. Furthermore, the number of animals being killed could be well beyond the annual replacement increment leading to further declines in the stocks.

For the second year in a row, the Scientific Committee of the IWC, which includes the top cetacean scientists in the world, has raised urgent concern over the magnitude of dolphin mortalities in the tuna fishery. The Committee recommended that estimates of the absolute abundance of the stocks be produced and it recommended that alternative fishing methods be developed.

Many of our members would advocate an immediate cessation of the practice of setting on dolphins. Indeed, many feel a sense of outrage that 16 years after the initial passage of the MMPA over 100,000 dolphins are being killed annually primarily to furnish tuna for the American market. What we propose, however, is a four year phaseout of the United States quota coupled with a strengthened regulatory program and a serious commitment to the development of alternative methods for catching tuna which do not involve dolphin mortalities. We propose a quota of 15,000 marine mammals in 1989, 10,000 in 1990, 5,000 in 1991, and zero thereafter.

At the outset, it is important to realize that the taking of dolphins by the tuna fleet is a highly intentional act. It is not a case of nets passively taking animals. The animals are deliberately chased and encircled. The history of the practice shows that unacceptable mortality levels are virtually unavoidable despite the best efforts of the industry. Due to the conditions encountered by the fishermen, disaster sets are inevitable. A concentrated effort to develop and implement fishing methods which will not involve the intentional taking of dolphins is long overdue.

Unfortunately, experience has shown us that little will be done to look at alternatives unless there is a technology forcing mechanism. During the 1981 reauthorization the Congress mandated that such a program be initiated. Section 110 (a) of the Act provides "...the Secretary shall undertake a program of, and shall provide assistance for, research into new methods of locating and catching yellowfin tuna without the incidental taking of marine mammals." Despite this clear mandate, neither the Department of Commerce nor the tuna industry has made a serious attempt to develop alternatives. In the interim, the U.S. tuna industry has become ever more dependent on the practice of setting on dolphins. In 1981, when this provision was added to the MMPA, 47 percent of the sets were made on dolphins. In 1986, when there was a 2 1/2 month closure for setting on dolphins because the industry had exceeded quota, 94 percent of the sets were made on dolphins. The year following the closure 78 percent of the sets were on dolphins and that may be one of the reasons for a reduction in dolphin mortality to less than 14,000. A new trend has developed since 1981; rather than phasing in alternatives, the industry has actually concentrated its efforts on dolphins.

This trend may be one of the reasons why there has not been a reduction in dolphin mortalities since the quota of 20,500 was first put into place in 1981 despite a marked drop in the number of U.S. vessels fishing for tuna in the ETP. In 1981, a 93 vessel fleet was able to meet the quota. Today there are 35 vessels in the fleet with the same quota. Despite this reduction, there has not been a corresponding reduction in either the quota or actual dolphin mortalities.

A progressive reduction in the quota will provide an incentive for the industry to develop alternative technologies. Unless the industry is weaned off of its dependence on dolphin sets, we cannot reasonably expect a reduction in dolphin mortalities despite their best efforts.

Such technology forcing measures have been used by the Congress in the past to accomplish a desired goal. As examples, the Clean Air Act and the Clean Water Act specified reduction in pollutants as a means of encouraging the development of new technologies. The quota reductions over the first two years of our proposal are not so rigorous that they require new technology. If the fleet were to return to the percentage of sets made on dolphins back when the static quota was first set, substantial reductions in dolphin mortalities could be achieved. Indeed, during the 2 1/2 month closure in 1986, despite dire predictions the industry demonstrated that it was possible to catch substantial amounts of tuna without setting on dolphins.

It is our hope that with the realization that there would eventually be a zero quota, the industry would use this lead time to develop, test, and implement new technologies. We feel that the Secretary of Commerce also has a responsibility in this area. The law currently provides that he or she shall take steps to encourage such technology. We recommend that Congress authorize and appropriate $500,000 for research and development in each of the next four years. Although such a funding level will not fully finance the development of alternatives, it should provide an impetus to achieve this end.

During the 1984 reauthorization, the Congress realized that measures were needed to reduce mortalities caused by the foreign fleets. Congress intended that foreign nations meet comparable regulations and kill rates if these nations wished to export tuna to the United States. As you are aware, the National Marine Fisheries Service has been inexcusably slow in promulgating the regulations necessary to carry out these provisions. We are now in a new reauthorization cycle, and the regulations are still not in their final form.

Even if they had acted promptly, however, these provisions would have been inadequate to protect dolphin stocks. They are ultimately dependent on fishing effort, and a marked increase in foreign fishing effort could render them virtually meaningless. Subsequent to the passage of this provision, two changes occurred which made the provision outdated before the final regulations were ever issued. First, there has been a change in the composition of the fleet. When the quota of 20,500 was first set for 1981, the U.S. fleet dominated the fishery, and it was assumed that the status was unlikely to change. The Final Environmental Impact Statement reached the conclusion that "...foreign caused porpoise mortality will remain unchanged or will not increase above U.S. levels during the (course of the permit)". The assumption has proven to be untrue. As the number of vessels in the U.S. fleet has declined, the number of boats in the foreign fleets has risen. Second, as in the case of the U.S. fleet, the percentage of sets made on dolphins has increased.

With the performance of the U.S. fleet serving as a baseline, we now find ourselves in a situation where even if the foreign fleets were to achieve comparability tomorrow, we could be sanctioning a kill of up to 65,000 dolphins. That figure is likely to increase. First, we have no assurance that the foreign fleet will not continue to grow. Mexico has added six boats within the last year with plans for more, and seiners are currently being built for the Republic of Korea and Guam. Second, there is no reason to believe that the trend toward increasing dependence on dolphin sets will not continue. The foreign fleet is still substantially below the U.S. fleet in the percentage of sets made on dolphins, and an increase in the percentage of dolphin sets could result in an increase in dolphin mortalities even though comparability standards are met. If Congress confines its changes in this portion of the Act to merely enforcing the 1984 amendments, the environmental community may well be back lamenting the fact that 100,000 dolphins were killed despite the fact that comparability standards were being met. In the interim, pressure on dolphin stocks will have continued to increase.

Unless the Congress reduces the absolute, numerical baseline for comparability standards, unacceptably high levels of dolphin mortality are virtually inevitable. That baseline is the performance of the U.S. fleet, and without a reduction in quotas, it is likely to remain relatively constant.

For the last few years, efforts to further reduce the number of dolphins killed by the U.S. fleet have been stymied by two arguments. First, any restriction on the U.S. fleet will force them into other fleets where restrictions do not exist at all. Second, any restrictions on the foreign fleets will force them to seek alternative markets. These two arguments have been used as an excuse for inaction. Meanwhile, the situation has continued to deteriorate to the point where the total number of dolphin mortalities is back up to what it was a decade ago. Simultaneously, the level of frustration of people concerned with the welfare of dolphins has risen. Quite frankly, we believe that the time has come when the validity of these arguments must be tested. Moreover, we have reason to believe that the predicted consequences will not occur.

There are two major reasons why there should not be a mass exodus from the U.S. fleet. Although the comparability standards are inadequate as they are currently constructed, the Congress has already established an important principle in the 1984 reauthorization of the MMPA. When they finally become effective, the comparability standards will mean that the same limitations that the U.S. fleet must meet will be placed on foreign fleets if the nations desire to export tuna to the United States. If Congress enacts the additional restriction that we have recommended to prevent intermediary countries from "laundering" the tuna catch of non-complying foreign fleets, U.S. standards should, in essence, become de facto international standards, and there will be little incentive for vessels to leave the U.S. fleet.

The second reason why reflagging should not occur is that it is illegal for a vessel to reflag in order to avoid U.S. regulations. Although this issue has been raised time and again when any effort has been made to tighten up the regulations governing the U.S. fleet, industry representatives have testified that no U.S. vessel has ever reflagged in order to circumvent U.S. laws. We note that there is something incongruous about failing to enact a law simply because it is feared that such a law might encourage a citizen to break another law in order to circumvent the first.

We disagree with the assumption that foreign fleets will choose to avoid regulations altogether by finding alternative markets. There is an element of chauvinism in such an argument. It assumes that only Americans care about dolphins and the impact of the tuna fishery on dolphins. Certainly that is not the case either from the standpoint of producing or consuming nations. At least a portion of the blame for this myth must lie with the environmental community. We have dealt with this issue as an American issue and made little effort to draw attention to it in other places in the world. We have begun to take corrective action in other countries, and we have found that the issue has the strong impact that it had in the United States prior to the initial passage of the MMPA.

For quite some time, countries in Western Europe have exhibited concern over small cetacean species. They have been among the most stalwart proponents of extending protection for these species through the International Whaling Commission. Until recently the people of Western Europe were unaware of the methods utilized to catch tuna in the ETP. Concentrated attention was not drawn to the tuna-dolphin problem until last spring. The public reaction was so great that a motion for resolution has already passed in the European Parliament. Formal initiation of the legislative process could lead the European Economic Community to enact a total ban on tuna caught on dolphin.

Similarly, when attention was drawn to the problem in Mexico last spring, it became a major political issue. The Mexican Minister of Fisheries first denied that Mexico was contributing to the kill and then indicated that the largest fleet in the fishery was willing to take corrective action to reduce dolphin mortalities. In a meeting with conservationists, the Minister indicated a willingness to implement alternative methods of catching tuna if they could be developed. Furthermore, Mexico has contacted the IATTC and expressed a desire for performance standards and increased observer coverage.

Other members of the environmental community have met with the Costa Rican Ministry of Fisheries, in which the Ministry expressed concern about the killing of dolphins within their exclusive economic zone.

Finally, the market dynamics of canned tuna are such that it is unlikely that nations will desert the U.S. market because of tighter constraints. The U.S. is so dominant as a market for tuna from the ETP that replacement through sales elsewhere is unrealistic. The United States consumes over 50 percent of all of the tuna harvested globally. In order to meet this demand, 50 percent of the tuna must be imported. The U.S. is also the dominant market for yellowfin tuna from the ETP. Virtually the entire U.S. ETP catch is delivered to American canneries. In addition, because of the proximity of the United States to the ETP and the high demand and prices available here, the U.S. is the most desirable market for other nations fishing in the ETP. Excluding Mexico, which still is under an import cap, 59 percent of the foreign fleets' catch is exported to the United States. An unknown additional quantity is processed in other countries such as Thailand and Taiwan and exported as finished product to the United States. To channel that quantity of tuna into other markets is just not feasible. Furthermore, the major alternative market for the tuna is within the European Economic Community. There is only limited opportunity for market expansion there, and fishing efforts in one of the competing fisheries which supplies the European market--the Indian Ocean--have recently expanded. In addition, as noted above, the European Parliament has become concerned with the issue and is likely to take some action which could limit the importation of tuna caught on dolphins.

In addition to the phaseout, the environmental community has proposed codification of measures which will reduce dolphin mortalities and assist the fleets in meeting the adjusted quotas. We believe that these measures will allow the U.S. fleet to meet the first two years of the quota reduction and allow time for the development of alternative fishing technologies. Similarly, implementation of measures to protect dolphins by foreign governments as required by the comparability provision will assist foreign fleets in reducing dolphin mortalities. The lack of both of these measures has been cited as a reason for the high mortality rates in 1986.

SUNDOWN SETS

Sets which extend past sundown result in kill rates considerably above daytime sets. Dolphin release procedures are more difficult when performed in darkness, and there have been reports that dolphin behavior is more erratic after sundown. From 1977-79 sundown sets accounted for 8 percent of all sets but were responsible for 28 percent of the overall mortality. Having studied the problem NMFS attempted to reduce mortality levels by promulgating regulations in 1981 to prohibit release of the net skiff later than 90 minutes before sundown. The regulation was suspended after eight days, however.

In 1986, NMFS required the use of lights in sundown sets. Initial indications are that the use of lights has reduced the disparity between night and day set, but mortality rates for sundown sets still exceed those for standard sets by a factor of two or more. Furthermore, the percentage of sundown sets has increased markedly, and they now account for 12 percent of all sets. The IATTC cited the increase in sundown sets as one of the factors responsible for the high kill levels in 1986. A small reduction in sundown sets (1 percent) was considered partially responsible for the lower 1987 kill levels.

The official mortality figures for sundown sets may be an underestimate of the actual impact. Several observers have reported to us that conditions are such that it is their opinion that dolphin mortalities are underreported in such sets. Darkness seriously limits their observational abilities, and only animals which are actually observed to be dead may be included in mortality reports.

We believe that a prohibition on sundown sets could result in a reduction in reported mortalities of 20 to 30 percent. It could also result in a reduction of unrecorded mortalities. When NMFS studied the difference between standard and sundown sets, their data showed that 90 minutes before sunset was the appropriate definition. This conclusion was based on two years of study and was directly related to the amount of time it normally takes to complete the backdown procedure. We would suggest that in defining sundown sets, the Congress should use the definition which has been in place for some time now.

PERFORMANCE STANDARDS

The environmental community also proposes that Congress require NMFS to promulgate performance standards for both operators and vessel owners. Such standards should be structured so that the certificate of any vessel or skipper which has mortality rates consistently above fleet averages is revoked. Although some disaster sets are caused by unpredictable events, others can only be attributed to failure to follow proper procedures or poor judgment on the part of skippers or lack of proper maintenance of equipment by vessel owners. Such practices as setting in poor sea or weather conditions and failure to maintain vessel and release gear must be discouraged.

When the tuna industry exceeded quota in 1986, industry representatives claimed that there were a few problem operators. At that time the industry requested that performance standards be set. NMFS referred to this in their draft performance standards. "Several industry representatives asserted that the quota was reached because a small number of the vessels in the fleet had exceptionally high kill rates because the operators of those vessels lacked the skill or motivation to maintain a low marine mammal mortality while fishing." Industry later retracted its request, and NMFS withdrew the proposed standards.

Certainly recent events have shown that there may be some "problem" skippers as a small number have demonstrated a disdain for the law. Recently, fines were levied against four skippers and one navigator for unlawful conduct toward federal observers. Another skipper was jailed for wantonly shooting into a dolphin herd. Ironically, certificates have not been lifted from any of these individuals who knowingly violated federal law. Former observers also submitted affidavits to the Senate subcommittee pointing out that some skippers have a lackadaisical attitude toward rescuing dolphins. Certainly there is evidence that some skippers are not conscientious in their performance. We recognize that the majority of the fleet does try to minimize dolphin deaths, and we see no reason why such individuals should be penalized by early closures resulting from the actions of a few individuals. Such standards become more important as the quota is reduced.

We also believe that performance standards must be set for vessels. Owners have a responsibility to maintain the vessel and its gear in proper working order. While it is unreasonable to assume that all gear malfunctions can be prevented, vessels which experience chronic gear problems should have their certificates lifted. Performance standards for vessels will ensure that good skippers are not penalized because of a failure on the part of an owner to maintain his vessel.

Finally, while we believe that the Expert Skippers Panel should play an important role in the development of such standards, we would object to a program which gives the Panel control over the decision of whether a certificate is to be revoked. At some point there must be an absolute standard which is enforced by the

Secretary and not by the industry. The possibility of conflict of interest and an understandable reluctance to take such action are too great to give the Panel a veto over the lifting of a certificate. This was demonstrated when the industry withdrew its request for performance standards. It was further demonstrated when members of the Expert Skippers Panel actually testified on behalf of the skipper who was recently imprisoned for shooting at dolphins.

UNDERWATER EXPLOSIVES

Underwater explosives, commonly referred to as seal bombs are used by both the U.S. and foreign fleets. These explosives are dropped from helicopters and thrown from speedboats and are used to disorient and herd the animals. Recent film footage taken aboard a Panamanian seiner even shows the use of explosives after encirclement with an inevitable disaster resulting.

The environmental community is gravely concerned over the long and short term effects of such a practice on the animals' auditory sensory abilities. Dolphins rely on echolocation and sound reception to locate and catch prey and to signal and identify pod members. Percussions underwater are magnified several times. Dolphins depend on their auditory sense in much the same way we depend on our eyes. A deaf dolphin is, in essence, blind, and very bluntly a deaf dolphin is a dead dolphin. It is likely that there is a substantial unrecorded mortality because of the use of this technique. A prohibition may also reduce observed mortalities. It is reasonable to assume that a dolphin which is less disoriented and in full possession of sensory faculties is easier to release than one which has panicked and does not possess its full faculties.

OBSERVER COVERAGE

We believe that 100 percent observer coverage is absolutely essential if we are to have a true picture of dolphin mortalities and if the regulations are to be enforced. Because of the application of comparability standards, it also will have the advantage of increasing observer coverage in the foreign fleet. We note that the Marine Mammal Commisssion made a similar recommendation in testimony before the Senate on April 13.

We are firmly convinced that the presence of on-board observers has an effect in reducing dolphin mortality. There is absolutely no evidence to suggest that vessels without observers operate in the same manner as those with observers aboard. Indeed these is a growing body of evidence to suggest they do not. Crooms in 1980 reported that vessels without observers inflicted higher mortality levels than reported. A more dramatic example is illustrated by a NMFS observer who has stated that while sampling U.S. vessels for the IATTC he observed flagrant violations of U.S. statutes such as setting on pure schools of protected stocks. IATTC observers only monitor mortality and have no enforcement powers to prohibit such activities. If vessels would violate statutes which relate to protected species with an observer present how might they operate in the absence of any observer knowing whatever mortality they inflict would not be reported or applied to the quota. While we do not believe these skippers turn into ogres the minute an observer is absent, we believe the presence of an observer will make a skipper think twice about setting, for example, during bad sea states and thus risk an observed disaster set which would be applied toward the quota.

We have some recommendations as to the operation of the observer program itself. The MMPA specifically refers to a zero mortality and serious injury rate. We have recently learned that NMFS does not include seriously injured animals in its mortality estimates. The agency admits that reports are supposed to contain such estimates, but they have not compiled the raw data. Only animals which are known to be dead are counted toward the mortality estimate. If an animal shows any sign of life it is not included even though it is almost certain to die later. We feel that seriously injured animals should be included in the mortality estimates.

Finally, recent events point to a troubling picture of observer harassment, verbal and physical abuse, and intimidation. We believe that all observers should be granted officer status such as is currently granted to U.S. observers placed on foreign vessels in the Bering Sea. They must be given the authority to record violations and, if necessary, order a vessel back to port.

CONCLUSION

Mr. Chairman and members of the subcommittee, since the last reauthorization of the MMPA, a very serious situation has developed with respect to the number of dolphins being killed in the tuna industry. We have discovered that it is impossible to fine tune the limits so that dolphins receive adequate protection. As long as the limits are dependent on fishing effort and a static quota, kill levels may continue at unacceptable levels. In the meantime, the consequences for dolphin stocks may be disastrous. As Dr. Fox of the Marine Mammal Commission observed after seeing the preliminary data from the abundance and trends study, "It will likely show that some affected porpoise stocks are smaller than previously estimated and that the combined U.S. and foreign incidental take could be causing one or more stocks to decline."

We suggest that the time has come to go back to the original purpose of the Act by mandating a phased reduction in dolphin kills to a zero mortality level. We also believe that serious attention must at long last be given to the development of alternative methods of fishing for tuna. If we are unable to break the cycle, we may face a situation where a relatively small segment of the fishing industry has decimated several species of dolphins over a thirty year period.

EP
PE

EUROPEAN PARLIAMENT

SESSION DOCUMENTS

English Edition 1988-89

28 April 1988 B SERIES DOCUMENT B2-226/88

MOTION FOR A RESOLUTION

tabled pursuant to Rule 63 of the Rules of Procedure

by Mrs WEBER, Mrs BLOCH von BLOTTNITZ, Mrs MAIJ-WEGGEN,
Mrs SQUARCIALUPI, Mr ELLIOTT, Mr NEWENS and Mr van der LEK

on imports into the Community of yellowfin tuna caught
by killing dolphins

A Series: Reports - B Series: Motions for Resolutions, Oral Questions, Written Declarations, etc. - C Series: Documents received from other Institutions (e.g. Consul

* = [illegible]

**II = [illegible]

The European Parliament,

A. recognizing the concern of the European Communities for conservation and animal welfare questions as expressed in the Council resolutions adopting first-, second-, third-, fourth Environmental Action Programme and numerous resolutions of the European Parliament,

B. recognizing also that this concern covers conservation and animal welfare not only within the Community but also outside, especially when the Community is shown to be an importer of products which are related to the massive kill of certain species,

C. concerned with the massive kill of dolphins that particularly takes place annually in the Eastern Tropical Pacific (ETP) by purse seine tuna boats fishing for yellowfin tuna,

D. noting that this directed kill of dolphins in tuna nets helped to create the passage of the US Marine Mammal Protection Act (MMPA) in 1972, which calls for the US tuna fleet to reduce kills to insignificant levels approaching zero,

E. noting however, that while the MMPA requires that all tuna exported to the US must be in conformity with US laws governing dolphin kills, many nations do not reach these standards and some have found alternative markets, most notably Europe and Thailand, where no such restrictions apply,

F. noting that while European boats do not fish for tuna in the ETP, Europe imports some 25 000 tons of yellowfin tuna, worth £18 million from this zone each year and therefore is becoming one of the largest and most important markets for this tuna that is caught by directly killing dolphins,

1. Calls on the Commission as a matter of urgency to come up with the exact figures of imports into the Community of yellowfin tuna caught by killing dolphins from the ETP and investigate the possibility of a ban on imports into the Community of this tuna (mainly from Mexico) in order to stop the yearly slaughter of dolphins;

2. Requests the Commission to report as soon as possible whether the results of this investigation calls for a Community ban on the imports of yellowfin tuna caught by killing dolphins in the ETP;

3. Instructs its President to forward this resolution to the Council and the Commission.

TABLE 1

ANNUAL MORTALITY FOR U.S. AND NON-U.S. FLEETS

YEAR	U.S. KILL	U.S. QUOTA	FOREIGN KILL	TOTAL
1959				*55,000*
1960				478,000
1961				534,000
1962				216,000
1963				240,000
1964				390,000
1965				460,000
1966				374,000
1967				257,000
1968				229,000
1969				461,000
1970				467,000
1971	246,213		15,719	261,932
1972	368,600		55,078	423,678
1973	206,697		58,276	264,973
1974	147,437		27,245	174,682
1975	166,645		27,812	194,457
1976	108,740	(78,000)	19,482	128,222
1977	25,452	(62,429)	25,901	51,353
1978	19,366	(51,945)	11,147	30,513
1979	17,938	(41,610)	6,837	24,775
1980	18,573	(31,150)	30,978	49,551
1981	18,520	(20,500)	16,516	35,036
1982	23,267	(20,500)	5,516	28,783
1983	9,589	(20,500)	[17,759]	[27,348]
1984	17,732	(20,500)	{26,252}	43,984
1985	19,205	(20,500)	{37,505}	56,710
1986	20,692	(20,500)	{108,767}	129,459
1987	13,992	(20,500)	{101,036}	115,028
TOTAL				6,174,136

1959 to 1970 N. Lo and Smith, 1986; 1971 to 1979 NMFS, FEIS, Nov 1980; 1980 to 1981 IATTC Annual Report 1982; 1982 IATTC Annual Report 1983; 1983 to 1986 for U.S. fleet Annual Report of the MMC, 1986. Total kill figures for 1984-1986, IATTC Annual Report 1984, 1985, 1986; 1987, IWC SC/40/SM2

Numbers in { } were arrived at by subtracting U.S. estimates from IATTC total fleet estimates.

Numbers in [ ] are rough approximations, arrived at from extrapolation of IATTC Annual Report data for kill average from 1979 to 1983, and should not be used.

TABLE 2

LIST OF MAJOR AND MINOR SPECIES/STOCKS OF SMALL CETACEANS IN THE EASTERN TROPICAL PACIFIC PURSE SEINE FISHERY

MAJOR SPECIES/STOCKS

- Spotted dolphin (Stenello attenuata)
    - coastal
    - northern offshore
    - southern offshore

- Spinner dolphin (Stenella longirostris)
    - eastern
    - Costa Rican
    - northern whitebelly
    - southern whitebelly

- Common dolphin (Delphinus delphis)
    - northern tropical
    - central tropical
    - southern tropical

- Striped dolphin (Stenella coeruleoalba)
    - northern tropical
    - central tropical
    - southern tropical

MINOR SPECIES/STOCKS

Rough-toothed dolphin (Steno bredanensis)

Bottlenose dolphin (Tursiops truncatus)

Risso's dolphin (Grampus griseus)

Pacific white-sided dolphin (Lagenorhynchus obliquidens)

Fraser's dolphin (Lagenodelphis hosei)

Melon-headed whale (Peponocephala electra)

Pygmy killer whale (Feresa attenuata)

Short-finned pilot whale (Globicephala macrorhynchus)

False killer whale (Pseudorca crassidens)

Source: Status of Porpoise Stocks Workshop, Southwest Fisheries Center, Admin Report No. LJ-79-41, Nov 1979.

TABLE 3

U.S. PERFORMANCE
AVERAGE ANNUAL KILL PER VESSEL

YEAR	NUMBER OF CERTIFIED VESSELS *	ESTIMATED ANNUAL KILL	ANNUAL KILL PER VESSEL
1981	93	18,520	199
1982	89	23,267	261
1983	60	9,589	159
1984	34	17,732	521
1985	36	19,205	533
1986	34	20,692	608

* Porpoise Rescue Foundation 01/09/87

TABLE 4

U.S. PERFORMANCE
KILL PER TON OF CAPACITY *

YEAR	ESTIMATED ANNUAL MORTALITY	FLEET CAPACITY	DOLPHIN KILL PER TON OF CAPACITY
1977	25,452	116,217	.219
1978	19,366	111,054	.174
1979	17,938	110,919	.162
1980	18,573	105,022	.177
1981	18,520	107,272	.173
1982	23,267	104,120	.223
1983	9,589	77,532	.124
1984	17,732	46,458	.382
1985	19,205	45,113	.426
1986	20,692	41,550	.498

* Calculations from NMFS data

TABLE 5

U.S. PERFORMANCE

AVERAGE ANNUAL KILL PER FLEET DAY FISHING

YEAR	FLEET DAYS *	AVERAGE KILL PER FLEET DAY
1981	19,057	.97
1982	17,559	1.32
1983	10,263	.93
1984	6,191	2.86
1985	6,459	2.94
1986	4,886	4.24

* Porpoise Rescue Foundation 01/09/87

STATEMENT OF DAVID G. BURNEY
GENERAL COUNSEL
U.S. TUNA FOUNDATION
BEFORE THE
HOUSE COMMITTEE ON MERCHANT MARINE & FISHERIES,
SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT
September 8, 1988

Mr. Chairman and members of the Subcommittee on Fisheries and Wildlife Conservation and the Environment, I submit this testimony with respect to the reauthorization of the Marine Mammal Protection Act (MMPA) on behalf of the entire United States tuna industry.

In my capacity as General Counsel to the U.S. Tuna Foundation (USTF) I have represented the domestic tuna industry on matters pertaining to the MMPA since 1976. I worked closely with the staff of this Subcommittee in 1981 and 1984, when the last substantive amendments were made to the MMPA.

Since 1984, USTF has represented the U.S. tuna industry in a variety of meetings scheduled by the Department of Commerce (DOC) to carry out the Congressional mandate set forth in the 1984 amendments to the MMPA (P.L. 98-364). These meetings involved such subjects as the status of porpoise stocks in the Eastern Tropical Pacific (ETP) ocean, the feasibility of alternative fishing methods in the ETP ocean and the possible effectiveness of proposed import regulations. During this period we also worked with the Porpoise Rescue Foundation and the Inter-American Tropical Tuna Commission (IATTC) in efforts to address matters raised by Congress during the 1984 oversight of the MMPA.

Recently, we have worked closely with the staffs of this Subcommittee and the Senate Commerce Committee regarding the present effort to reauthorize the MMPA. The status of the tuna/porpoise issue was fully discussed in a Senate Commerce Committee hearing held this past April. The main concern identified at that hearing was the incidental mortality of porpoise by foreign tuna fleets, which is continuing to exceed the rate of the U.S. fleet by more than four times.

While the record of the U.S. fleet in maintaining an annual porpoise release rate of over 99% was praised, the Senate Commerce Committee condemned the failure of foreign fleets to improve their performance. Committee members expressed displeasure over the failure of the DOC to promulgate timely import regulations that would require these foreign fleets to meet U.S. fleet performance standards. It was agreed that something had to be done immediately to address the unacceptably high porpoise mortality attributed to the foreign tuna fleets.

Consequently, we were dismayed to learn that the Staff Working Draft of August 17, 1988, contained new statutory restrictions aimed at the U.S. fleet. The proposed restrictions totally ignore the exemplary record of the U.S. fleet and the lack of any credible data indicating that affected porpoise stocks have declined since last reviewed in 1984.

My testimony today will cover three important aspects of the tuna/porpoise issue. They are:

*The U.S. quota for marine mammals that may be taken incidental to U.S. purse seine tuna fishing operations in the ETP ocean.

*The status of marine mammal population stocks in the ETP ocean, including the trends and abundance indices of these stocks since 1984.

*The import regulations which require foreign purse seine fleets to lower their incidental take of marine mammals to rates comparable to that of the U.S. purse seine fleet.

Quota

In 1984, the MMPA was amended to establish for an "indefinite period", the annual quota of marine mammals that can be taken incidental to U.S. purse seine tuna fishing in the ETP ocean. The quota of 20,500 was initially established in 1981 after what was the longest and most expensive administrative rulemaking procedure in the history of U.S. fisheries. Earlier quotas had been established for fixed time frames after similar administrative rulemaking procedures.

The 1984 Congressional oversight of the MMPA produced a consensus that something had to be done to eliminate the costly administrative rulemaking procedures. It was agreed that the U.S. tuna fleet was utilizing the best marine mammal safety technology and procedures that were available. It was also agreed that the incidental take of marine mammals by the U.S. tuna fleet had been reduced to levels that were commensurate with the best use of this technology and procedures.

In recommending that the quota be extended indefinitely the Senate Commerce Committee, in its report on the 1984 MMPA reauthorization, stated, "The permit is being extended for several reasons, one of which is the fact that the industry has done a very commendable job of reducing porpoise mortality since the early 1970's." "... given the progress made by the tuna industry in reducing the incidental take of porpoise, little would be gained by going through another Department of Commerce permit hearing once the current permit expires." (Senate Report #98-450, p.2, May 16, 1984)

Some opponents of the statutory quota argued that if the quota wasn't periodically "racheted down" the U.S. tuna fleet would no longer have an incentive to use its best effort to minimize the incidental mortality of marine mammals. This argument was first rejected by Congress in 1981 when the MMPA was amended to permit the U.S. tuna fleet to meet the "zero mortality" goal of the Act, "by a continuation of the application of the best marine mammal safety techniques and equipment that are economically and technologically practicable." (P.L. 97-58, October 9, 1981)

Congress rejected this argument again in 1984 when it established the statutory quota for an "indefinite period". Not only was Congress convinced that the U.S. tuna fleet was using its best efforts to minimize the incidental take of marine mammals, they also realized that any quota would have to be flexible enough to account for the rapidly changing dynamics in the tuna fishery of the ETP ocean. Forces such as climatic conditions, interspecific dependencies, vessel logistics and political constraints can annually affect the incidental take of marine mammals by the U.S. tuna fleet.

We have been informed that some critics of the 1984 statutory quota believe that it should be reviewed because they claim there are fewer U.S. purse seine vessels currently operating in the ETP ocean than in 1984. We are told that these same parties allege that the U.S. harvest of tuna from this fishery has also decreased since 1984.

Neither of these claims is true. At the time that Congress considered the 1984 amendments to the MMPA, there were thirty-four (34) U.S. purse seine vessels certified by the DOC to participate in the subject fishery. In 1988 there are thirty-five (35) U.S. purse seine vessels certified to participate in this fishery.

In 1984, the certificated U.S. fleet of thirty-four (34) purse seine vessels harvested 59,400 tons of yellowfin tuna from the subject fishery. In 1987 the U.S. fleet of thirty four (34) purse seine vessels harvested 82,200 tons of yellowfin tuna from the same fishery. This substantial increase in harvest from 1984 to 1987 illustrates the dynamic nature of the ETP ocean tuna fishery.

In 1984, the Senate Commerce Committee carefully examined what effect the permanent quota might have on future marine mammal population stocks. The Committee report on the 1984 MMPA reauthorization recommended that the DOC conduct an ongoing marine mammal population trend analysis. The report went on to state, "This section directs the Secretary to 'take such action as is necessary' in the event that this research shows that tuna fishing is having a 'significant adverse effect' on these marine mammal stocks." Significant adverse effect was defined as, "... a situation in which the incidental take of marine mammals by the tuna industry is a direct cause of a continuing overall decline in the population of these stocks." The report then stated, "Population declines due to natural causes would not be sufficient grounds for the alteration of quotas or fishing practices." (Senate Report 98-450, p.8, May 16, 1984)

The 1984 quota was based on the assumption that the U.S. tuna fleet would continue the application of the best marine mammal safety techniques and equipment that are economically and technologically practicable. Clearly, the record of the U.S. tuna fleet in 1987 demonstrates that this is the case. With a record 95 percent of the U.S. tuna fleets fishing days observed by Federal authorities, the incidental take was documented to be 31.7 percent below the MMPA quota, the mortality per ton of tuna caught was 0.17, the lowest in history, and the percentage of marine mammals released safely was 99.34 percent.

Those that argue that 1987 was an aberration and not indicative of the U.S. fleets real performance since 1981 should examine the mortality per ton statistics of the fleet since 1981. The attached graph clearly demonstrates that the average mortality per ton has trended downward since 1981 (Attachment 1). The trend line is down even though the U.S. fleet has consistently maintained an average release rate of over 99 percent during this period, thus allowing little room for improvement.

It is totally misleading to allege, as some have, that the U.S. fleet has not improved its performance because it conducted more porpoise sets in 1985 and 1986 than in past years. This merely illustrates the dynamic nature of the fishery. No one can predict where fish will be found. Some years school fish are found, some years fish are taken on logs and some years they concentrate with porpoise. In 1987 and so far in 1988, the number of porpoise sets has been reduced significantly. Where the fish are found is not indicative of the fleet performance regarding marine mammal safety.

It is equally misleading to infer that the U.S. fleet has not made efforts to improve its marine mammal safety technology and techniques. The U.S. tuna industry has been directly responsible for introducing all of the marine mammal safety technology into the ETP tuna fishery. They have not, as some are now claiming, rested on past laurels and ignored the need to examine new technology and techniques. You must understand that the existing technology has resulted in a release rate of over 99 percent. Future improvement can only be de minimis, not dramatic. Congress recognized this in 1984 when it set the statutory quota.

Many marine mammal safety technologies and techniques have been examined by the U.S. fleet over the past several years. Some have proved successful and some have not. Those with notable success are hand release, speedboats at the apex of the backdown channel, the Medina panel, the fine-mesh panel, the Bold Contender or super-apron system, increasing the net depth and backdown lights during sundown sets. Those which did not prove effective were gates in the corkline, killer whale sounds, current ribbons, antitorque cable, antisway balls on the purse cable davit, anchored FAD's and Sea World's towed array system.

Currently the industry's gear experimentation program includes work with new snap rings which permit a vessel to release marine mammals sooner, thus lessening the chances of mortality; double cork lines to eliminate canopies and net collapses prior to backing marine mammals out of the net; and new high intensity lighting to improve night release performance.

In addition, the industry is constantly reviewing all U.S. fleet fishing sets to determine the cause of any incidental marine mammal mortality. Through this review the industry's Expert Skippers Panel is better equipped to work with new operators and operators who experience difficulty. The industry is not sitting back on its past success but is actively trying to improve its performance in a fishery that is unpredictable and gives no reward for error.

Status of Stocks

A major issue before Congress in 1984 was the continuing controversy over the reliability of data and assumptions used in the calculation of optimum sustainable population (OSP). Prior to 1984, administrative rulemaking procedures required a finding of OSP for each marine mammal population stock of the ETP ocean tuna fishery before quotas could be established for the U.S. tuna fleet. Finding an OSP level requires the ability to compare a current population size with a pre-exploitation population size. According to Tim Smith, Chief Scientist for the National Marine Fisheries Service tuna/porpoise interaction program, this proved virtually impossible for the marine mammal population stocks of the ETP ocean.

In 1984, after listening to the testimony of Tim Smith and other government scientists charged with the responsibility of conducting the last population survey in 1979, the House Merchant Marine and Fisheries Committee reported, "... there are continuing disputes about the validity of data and assumptions used in calculations of present and historical stock size necessary under current permitting procedures." "This (sic) dispute precipitated extensive legal and administrative proceedings over the issuance of the general permit for incidental take, and it appears likely that similar disputes would again arise in the issuance of future permits." The Committee report concluded by stating, "In essence, it has become apparent that the available data base is inadequate to support the calculations necessary for this method to be an effective management tool." (House of Representatives Report #98-758, p.5, May 15, 1984)

In 1984, both the House and Senate decided that a new and better approach should be followed to determine the status of marine mammal population stocks in the ETP ocean. They therefore directed the DOC to, "undertake a scientific research program to monitor for at least 5 consecutive years and periodically as necessary thereafter, the indices of abundance and trends of marine mammal population stocks which are incidentally taken in the course of commercial purse seine fishing for yellowfin tuna in the eastern tropical Pacific Ocean". (P.L. 98-364, July 17, 1984)

The most recent government estimate of the marine mammal population stock sizes in the ETP ocean tuna fishery is set forth in the November 1987, Environmental Assessment of the Modification to the Marine Mammal Regulations, published by the DOC. (See Attachment 2). This table is based on the last population survey conducted in 1979 which was the subject of both an extensive administrative and judicial review process. The table along with attachment 3 hereto, demonstrates that each marine mammal population stock in the ETP ocean has continued to increase since 1979. In fact, the government concluded in the November 1987 Environmental Assessment that, "The most significant result of this recalculation is that every principal population stock is above its respective optimum sustainable population (OSP) level."

We are aware that there are those that question the validity of the 1979 survey and argue that the population estimates were ultimately decided by judical decision, not scientific consensus. These critics fail to point out that the U.S. Federal Court decision did nothing more than uphold the decision of the Administrative Law Judge (ALJ) who was charged with the responsibility of reviewing all of the scientific evidence presented with regard to the 1979 survey.

We understand that some continue to argue that the 1979 population survey has been challenged in papers published subsequent to the final ALJ decision. Critics of the ALJ decision make specific reference to a paper published in 1983 by Tim Smith. The 1983 paper is nothing more than a rehash of arguments that were completely rejected by the ALJ when he reviewed the 1979 survey. It is important to note that Tim Smith appeared before Congress in 1984, and admitted that efforts to calculate present and historical populations was next to impossible. He was the person who convinced this Subcommittee that the only way to assess the status of porpoise populations was to conduct a five year abundance trend analysis.

Presently, two years (1986-87) of the five year abundance trend study have been completed. A preliminary analysis of the data by the DOC concluded that the 1987 estimates were substantially higher than the 1986 estimates. In fact the increase was so large that the DOC judiciously stated that in any event the relative abundance between 1986 and 1987 was not significant. There was no evidence presented that the populations were being impacted by the U.S quota as some have alleged.

It has been argued that the preliminary data from the 1986 and 1987 trend analysis supports the contention that the marine mammal populations have seriously declined since the 1979 survey. This is an attempt to compare apples with oranges. The 1979 study was an attempt to conduct a full scale population study. The 1986 and 1987 surveys are points on an ongoing trend analysis and were never intended to be treated as a fullscale population study. Any attempt to treat them differently is misleading and has no scientific basis whatsoever.

Import Regulations

The U.S. tuna industry believes that the import regulations of March 18, 1988 were long overdue. We have consistently asserted the need to examine the incidental take of marine mammals by foreign purse seine vessels operating in the ETP ocean tuna fishery. As far back as 1976 we advocated that the tuna/porpoise issue should be appoached regionally, not in isolation by the United States.

We supported the 1984 amendment to the MMPA which directed the DOC to address this matter through the promulgation of import regulations. We agreed that nations desiring to export tuna from the ETP tuna fishery to the United States should be required to meet U.S. marine mammal safety standards. We also agreed that these nations should offer reliable proof that their purse seine vessels which operate in the subject fishery have reduced the incidental take of marine mammals to a rate comparable to that of the U.S. tuna fleet.

After enactment of the 1984 amendment, we worked with other interested parties and the DOC to devise import regulations that would be effective in reducing the incidental take of marine mammals by foreign tuna vessels. We cooperated with the IATTC in efforts to encourage foreign nations to join the IATTC tuna/porpoise interaction program.

It is encouraging that for the first time, in 1986, all of the foreign nations with active purse seine fleets in the ETP ocean tuna fishery participated in the IATTC tuna/porpoise interaction program. Equally encouraging, was the drop in the estimated incidental take of marine mammals by foreign tuna vessels in 1987, as compared to 1986.

We share the concern of other interested parties over the fact that implementation of the import regulations was delayed for such an excessive period. We recognize however, the difficulty in promulgating import regulations that will effectively reduce the incidental take of marine mammals by foreign tuna vessels, when these vessels have readily available alternative markets if they choose to ignore U.S. law.

We believe that foreign governments will, if encouraged, continue to work through the IATTC in order to meet the standards set by the March 18, 1988 import regulations. It is important that we show these nations that there is predictability and consistency in the approach that we are asking them to take. The IATTC should be consulted closely during the implementation period to insure full cooperation. If the objective is to effectively reduce the foreign incidental take of marine mammals, the IATTC must be a major participant.

Summary

The U.S. tuna fleet is continuing to use its best effort to limit the incidental mortality of marine mammals in the ETP ocean tuna fishery. The record of the U.S. tuna fleet is proof of this.

No marine mammal population stock of the ETP ocean has experienced a significant decline as a result of tuna fishing in this area since enactment of the 1984 amendments to the MMPA. In fact, all population stocks are expected to increase in size through 1990.

We continue to support the need to monitor the marine mammal population trends and abundance indices in the ETP ocean. We are certain that this is the only reliable method for determining the status of marine mammal population stocks in the future.

We support all efforts to effectively reduce the incidental take of marine mammals by foreign tuna vessels to levels that are comparable to that of the U.S. tuna fleet. We are prepared to work with this Committee, the DOC, and the IATTC to reach this goal.

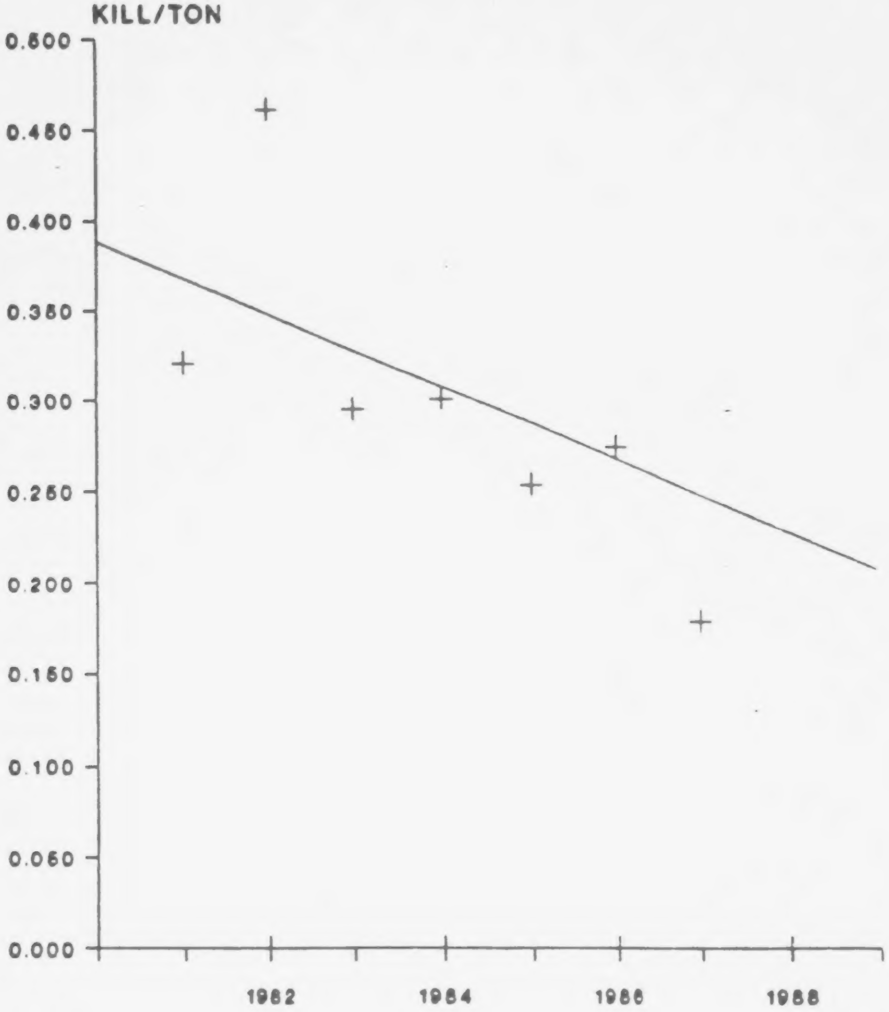
Objectively viewed, the record of the U.S. tuna fleet in reducing the incidental take of marine mammals since enactment of the MMPA has been a success story. In fact, it was this record that led Congress to conclude in 1984 that foreign tuna fleets should be required to meet the same high standard set by the U.S. tuna fleet in order to export tuna products to the United States. We agree.

There is no reason to further regulate the U.S. fleet. Efforts in this regard will only discourage foreign fleets from attempting to meet U.S. standards. The only effective way to significantly reduce the incidental take of marine mammals is to persuade foreign fleets to reach the performance level of the U.S. fleet. If foreign fleets believe that nothing the U.S. fleet accomplishes will satisfy "protectionists" in the United States, they will have no incentive to improve.

Inflamatory rhetoric aimed at inciting the emotionalism attached to this complex issue must be judged objectively. The facts are that the U.S. fleet continues to improve its performance, even though the improvement is tempered by the degree of proficiency already achieved. Nothing has changed since 1984, the rational approach is still to implement the import regulations and monitor the ongoing five year trend analysis to its completion.

ATTACHMENT 1

OBSERVED KILL PER TON BY U.S. FLEET FOR 1981-1988



ATTACHMENT 2

ole 3. Estimated 1979 and Future Population Levels.

ecies/Stock Management Unit	Estimated 1979 Population	1979 Status[1]	Adjusted 1979 Population[3]	Adjusted 1979 Status[1]	Projected 1990 Status[2]
otted dolphin					
northern offshore	3,150,000	.63	6,115,000	.85	.92
southern offshore	638,700	.95			.93
coastal	193,200	.42	414,600	.76	.89
inner dolphin					
eastern	418,700	.27	918,000	.55	.71
northern whitebelly	486,600	.78			.83
southern whitebelly	264,900	.90			.90
mmon dolphin					
northern tropical	216,900	.97			.94
central tropical	848,400	.89			.94
southern tropical	477,100	1.00			.99
riped dolphin					
northern tropical	50,600	1.00			.98
central tropical	213,300	.99			1.00
southern tropical	483,000	1.00			1.00

Proportion of pre-exploited stock size.

Projected from adjusted population for northern offshore spotted, coastal spotted, and eastern spinner dolphin nd from estimated 1979 population for all other populations; includes assessment for equal levels of U.S. and on-U.S. porpoise mortality; incorporates actual 1980-84 mortality; assumes 1985-89 mortality will occur in same roportion as 1979-84 mortality by species, and that total mortality will equal quota level each year 1985-89.

Adjusted in accordance with court directive only for northern offshore spotted, coastal spotted, and eastern pinner due to question about status of population; other populations were and continue to be healthy and djustments were not of significance at this time.

U.S. House of Representatives

Committee on Merchant Marine and Fisheries

Subcommittee on Fisheries and Wildlife Conservation and the Environment

HEARING

on the

Marine Mammal Protection Act

Statement of

James Joseph

Director, Inter-American Tropical Tuna Commission

Washington, D.C.

8 September, 1988

I am JAMES JOSEPH, Director of the Inter-American Tropical Tuna Commission, an international scientific body established by treaty in 1949, with headquarters at Scripps Institution of Oceanography in La Jolla, California. The Commission's duties are the study, conservation, and management of the tuna and tuna-like resources of the eastern Pacific Ocean. I am a scientist by training, and have spent over 30 years working on matters related to the scientific study and conservation of marine species. I have served as an advisor to numerous nations and organizations in matters related to fisheries science and conservation, have published some 100 books and articles on these subjects, and have been responsible for the management and conservation of the tuna resources of the eastern Pacific Ocean.

When asked to testify before this Committee, I was initially reluctant to do so, as I had already testified on this subject before a similar Senate Committee earlier this year, and felt that my testimony might be repetitive and redundant. However, I believe the issue to be of great importance, and am grateful for the opportunity to present my views afresh. My testimony will be essentially identical to that which I presented before, with a few modifications and updates.

The two topics of major importance that I would like to deal with are first, the international program addressing the problem of dolphin mortality, its goals and accomplishments, and second, ways and means of reducing this mortality. The killing of dolphins is not a new phenomenon; it has occured on a large scale since the introduction of modern purse-seining in the late 1950s, but even before then some dolphins died in the nets of boats fishing in the more inshore waters of the eastern Pacific for species other than tuna.

It has long been common knowledge that yellowfin tuna and dolphin occur in very close association in the eastern Pacific Ocean, and fishermen have used this association to their advantage in their search for tuna. Although the same species of dolphins and the same species of tuna occur in close proximity throughout most of the tropical seas of the world, it is apparently only in the eastern Pacific that they associate so closely that they are captured together. A number of theories have been proposed as to why this should be so, but the phenomenon remains unexplained.

During the last 10 years, the catches of yellowfin tuna taken in association with dolphins in the eastern Pacific have ranged from 216 to 42 thousand tons. This represents between 69% and 40% of the total catch of yellowfin tuna from the eastern Pacific, and about 55% to 23% of the total catch of all tunas taken by the eastern Pacific surface fleet.

In order to catch the tuna, the fishermen encircle the mixed school of tuna and dolphin with a large purse-seine net, hoist the tuna aboard the vessel, and release the dolphins. During this process most of the dolphins are released, but some are inadvertently killed. This form of fishing was developed by U.S. fishermen in the early 1960s, and dominated by them until the late 1970s. Since then, the number of vessels of other nations has increased considerably, and they now constitute the larger proportion of the international fleet. Table 1 shows the number of vessels large enough to fish for dolphin-associated tuna, classified by flag, that have fished in the eastern Pacific since 1970. The figures represent the annual maximum number of vessels that would be involved in fishing for tuna associated with dolphins. In 1970 U.S. flag vessels accounted for about 86% of the fleet; by 1988 this figure had fallen to 29%. During the same period, Mexico's share rose form 1% to 38%, and Venezuela's from zero to 18%, making these fleets the first and third largest in the fishery. The non-U.S. fleet now accounts for 71% of the total.

The public first became aware of this tuna-dolphin problem in the late 1960s. As nearly all of the fishing for tuna on dolphins at that time was conducted by U.S. flag vessels, the government of the United States took measures to address the problem. In the early 1970s the Department of Commerce initiated a program to estimate the numbers of dolphins killed by U.S. fishermen, and at about the same time a program was begun to investigate ways of modifying fishing procedures so as to reduce dolphin mortality. This was followed by the implementation of regulations designed to reduce this mortality.

As U.S. dominance in the fishery declined and other fleets grew, the member governments of the Inter-American Tropical Tuna Commission (IATTC) recognized that the scale of the problem was not understood, and that cooperation among the nations whose vessels fish for tuna in the eastern Pacific would be necessary for the proper scientific study and conservation of the dolphin populations of this ocean area. The member governments therefore mandated the Commission to undertake a program to estimate the extent of the mortality caused by the international fleet, assess the impact of this mortality on the populations of dolphins, and investigate ways of modifying fishing gear and techniques which would reduce dolphin mortality to the lowest level possible.

The IATTC's program has been in operation since 1979. It began modestly, and concentrated mostly on enlisting the participation of all tuna-fishing nations in efforts to monitor mortality, and on research directed towards the development of gear to reduce mortality. As the capacity of the non-U.S. fleets increased, the program was expanded and broadened in scope: in particular, the observer program, which places scientific technicians aboard purse-seine vessels to monitor dolphin mortality, was greatly augmented. At the present time, all the nations whose vessels are involved in this fishery participate in the IATTC's program, and during the last two and a half years IATTC scientific technicians have accompanied over 30% of all fishing trips in the eastern Pacific.

This international cooperation is essential if we are to know how many dolphins are being killed, and how this mortality affects the populations of dolphins. There is no other way to obtain the necessary information; we rely on the willingness of governments and vessel owners to allow our scientific technicians to accompany their vessels during commercial voyages. Without a realistic estimate of what is going on in the fishery by way of mortality, and without some idea of the abundance of the populations of dolphins, the impact of man's activities cannot be assessed. Likewise, without data based on observation of the fishing process, techniques for reducing dolphin mortality cannot be developed. The scientists' role in this regard is to provide accurate information on which the decision makers can base rational and informed measures to correct the problem. Again, the cooperation of all nations is a *sine qua non* of such a process: without it there would be no information on the extent of the problem and the results of measures taken. Without information, intelligent and rational decisions would be impossible, and the goal we are all striving for, saving dolphins, might not be accomplished.

The following is a brief summary of some of the important features and results of the IATTC's international tuna-dolphin program.

The International Observer Program

In order for the IATTC to carry out its mandate with regard to the study and conservation of dolphins, large amounts of data have to be collected from fishing vessels at sea, and it was for this purpose that the international observer program was devised and developed. The data are collected by scientific technicians recruited from all countries from whose ports tuna vessels operate. All the technicians have backgrounds in biology, and before being assigned to vessels they undergo a two-week intensive training course, during which they are instructed in the collection of the detailed information required for the estimation of the mortality and apparent abundance of the dolphin populations of the eastern Pacific Ocean. They also gather data on the use of dolphin-saving gear and procedures: this information is necessary for diagnosing problems in the actual fishing operations, and is used in the IATTC mortality reduction program. If the dolphin mortality corresponding to a particular vessel appears to be unusually high, our gear experts carefully scrutinize the technician's reports to determine the cause, and then attempt to rectify the problem, in consultation and collaboration with the crew of the vessel in question.

Features of the observer program:

- The goal is to sample 33% of all fishing trips from all countries. Several extensive simulation studies were used to determine a level of coverage that could provide adequate levels of statistical precision and accuracy without excessive cost. Currently all countries are participating in our program, most of them at levels close to or above the target.

- All information obtained is treated in confidence, and can only be released with the permission of the skipper, manager, and nation concerned. It is only used and published in aggregate form for the whole international fleet. The objective is to assess the total impact of fishing on the dolphin populations, rather than the individual effect of a nation's fleet. A very thorough quality control is exercised at the end of each trip to ensure the accuracy of the data collected.

- The participation of the various nations and industries is voluntary; there is no obligation to accept a technician on board a vessel. The technicians are entirely independent of governments and local industries, and do not enforce any laws or regulations regarding either tunas or dolphins. Technicians are assigned to vessels randomly, and are instructed not to interfere in any way with the activities of the vessel or crew.

- The coverage of U.S. vessels is shared with the national observer program managed by the National Marine Fisheries Service (NMFS). By agreement, our technicians send radio reports to the NMFS; these are used to estimate mortality caused by the U.S. fleet.

As has already been noted, the U.S. fleet dominated the fishery until the late 1970s, when the fleets of other nations began a rapid expansion. Table 1 shows the changes in fleet composition between 1970 and the present; the following table, which shows the number of fishing trips in which sets on dolphin-associated tuna were made, shows even more clearly how this situation changed:

Fleet	1979	1980	1981	1982	Year 1983	1984	1985	1986	1987
U.S.	246	243	244	205	133	118	125	95	129
Non-U.S.	184	195	197	115	90	168	233	274	290

In 1979 the non-U.S. fleet accounted for some 40% of the total trips; by 1986 this figure had risen to about 75%.

As previously noted, the United States also maintains a national observer program, designed and operated by the NMFS. Observers started accompanying tuna boats in 1964, but coverage was very sporadic until the NMFS program got fully under way in the mid-1970s. The IATTC's program began in 1979, but full coverage was not attained until 1986, as can be seen from the following table. Since then coverage has been very good, and is sufficient to provide a statistically significant estimate of dolphin mortality for the entire fleet.

No. of trips observed	1979	1980	1981	1982	Year 1983	1984	1985	1986	1987
U.S. IATTC	31	55	58	43	35	26	26	23	44
NMFS	67	43	34	29	0	11	23	20	80
Non-U.S.	10	8	4	8	3	8	22	78	90
Total IATTC	41	63	62	51	38	34	48	101	134

The proportion of observed non-U.S. trips increased even more rapidly than the corresponding non-U.S. effort on dolphin-associated tuna, from about 9% of the total of observed trips in 1979 to about 42% in 1987. In this latter year the coverage of U.S. trips was nearly 100%, a level which will not be sustained in 1988. Coverage of non-U.S. trips will be somewhat higher in 1988 than it was in 1986, when it constituted about 65% of all observed trips.

The sudden increase in coverage in 1986 corresponds to the incorporation of the Mexican fleet into the program. These increased sample sizes have greatly improved the quality of our estimates and reduced biases.

In order to administer this program, the IATTC has expanded its field stations in Ecuador, Panama, Mexico, and Venezuela.

Estimation of Incidental Mortality

The mortality of dolphins in the fishery has been estimated for each year since 1960, when purse-seining for tuna first became the dominant mode of fishing in the eastern Pacific. The estimates for the entire international fleet, U.S. and non-U.S., are presented in Figure 1. The estimates for the years 1960-1978 were calculated by the NMFS from U.S. trips only. For the period 1960-1973 they were based on hardly any samples. The estimates for 1979-1987 are based on samples from vessels of all countries, and were computed by the IATTC. During 1986-1987 coverage is much higher. The figure is self-explanatory: the extremely high mortality in the early years was followed by a sharp decline in the mid-1970s. The mortality remained low through 1983; it increased in 1985, peaked in 1986, and declined in 1987. The poorest estimates in the series are for 1960-1973; those for 1974-1985 are only moderately good, due to the low coverage of the non-U.S. fleet. The 1986-1987 estimates are much more accurate, and this improvement is directly attributable to the IATTC's international program. In fact, without this program there would be no reliable estimate of total mortality, and the magnitude of the kill would go undetected.

During this same period, 1960-1987, the decline in dolphin mortality was accompanied by an increase in the fishing effort on dolphin-associated tuna, as shown in Figure 2. Between 1960 and 1970 about 6,000 sets were made each year; by 1985 this figure had almost doubled, and by the end of 1987 had reached nearly 13,000 sets. Changes from year to year in the kill-per-set figures reveal whether the fleet is improving its performance as regards dolphin mortality, but for the figures to be accurate, the estimates must first be grouped into categories, such as species and areas, and the estimates then calculated for each of these groups. This is the method used by the IATTC staff, but the quantity of data involved is enormous, and the statistical methods complex, so for the sake of simplicity and convenience we have computed estimates by combining all the data, thus obtaining a rather rough-and-ready overall index of fleet performance. These estimates are presented in Figure 3, and show a trend line similar to the estimates of total mortality presented in Figure 1: the mortality rate declined precipitously in the early years, stayed low through 1983, peaked in 1986, and declined again in 1987.

The decline in mortality per set, or average individual vessel performance, has been impressive: the average kill of 90 animals per set at the beginning of the fishery for tuna associated with dolphins has been reduced by about 98%. This is excellent progress, but it is not good enough; we want to, and indeed must, reduce the mortality even further.

The data collected by the IATTC technicians reveal a very high degree of variability in the mortality per set (kill-per-set), or per ton of tuna caught (kill-per-ton), within the various fleets. These values may vary from one year to the next, as shown in Figure 4, which shows the kill-per-set and kill-per-ton for a particular fleet and for three different fishing areas. Annual variability in kill rates of about 50% is common, and in some cases rates can double or halve in a year. Some of this variability results from disaster sets, in which gear malfunctions or adverse environmental conditions result in abnormally high mortality. Such sets are rare, and few in number, but their impact on the estimates is considerable.

Most sets have very low kill rates. In 1987 about 50% of all sets on dolphin-associated tuna by vessels of all fleets did not kill any animals at all; a further 10% of the sets killed one animal, and in 90% of the sets less than 17 animals were killed per set. On the other hand, 3% of the sets kill more than 50 animals, and in a given year a few disaster sets can each result in the death of several hundred animals. Obviously, we would like to increase the proportion of sets which kill no dolphins at all, and the IATTC program targets particularly on those vessels and crews that fall in the 3% high kill category.

The herds of dolphins captured in 1987 averaged 400 animals. 3% of all schools consisted of more than 1,500 dolphins in 1987. The data reveal a correlation between the size of the schools and the mortality: sets on very large schools contribute greatly to the overall mortality. The IATTC staff are focusing on this problem, and collaborating with the vessel crews in an attempt to resolve it.

Abundance estimation

It is essential to monitor the abundance of the populations of dolphins involved with the tuna fishery in order to detect changes in population size which could be related to incidental mortality caused by the fishery. Specifically, we need to be able to tell if a population has been increasing or decreasing, or has remained stable, over a given period, and to relate these changes to mortality.

There are several ways of determining this. Aerial or shipboard surveys have been used in the past to gather the necessary information; currently, the NMFS is conducting a series of cruises, using research vessels, designed to permit the estimation of trends in population abundance. The advantage of these surveys is that they can be designed to meet the requirements of the statistical methods used to calculate abundance estimates from the data.

At the IATTC, data collected by the scientific technicians aboard tuna vessels have been used to estimate abundance. The estimates derived from these data can be unreliable, due to the way tuna vessels operate, but the relatively low cost of obtaining this information, plus the large sample size and area covered by the fleet, are important advantages. Statistical techniques have been developed at the IATTC which permit less biased estimation of trends in population abundance from such data.

Figures 5 through 12 show the trends in the abundance of the major stocks of dolphins involved in the tuna fishery. In the upper half of the figures, the shaded areas represent confidence regions, of varying degrees of confidence. The horizontal bars below summarize the results of tests for linear trends for each five-year period; shaded bars reflect statistically significant linear trends. Such tests are important because they demonstrate that what may appear to be an obvious trend in abundance, whether positive or negative, may in fact not be significant or even real.

The data for the northern spotted dolphin suggest a downward trend in abundance from 1975 through 1981, followed by an increase during the mid-1980s (Figure 5). The very low estimate of abundance for 1983 contributes to the statistical significance of the 1979-1983 decline, and to the significant increase after 1983. It is almost certain that the figure for 1983 is a considerable underestimate, and may be somehow related to the very strong El Niño in that year.

The southern stock of spotted dolphins shows a statistically significant decline in abundance prior to 1980, followed by an apparent increase for two years, and a subsequent decreasing tendency (Figure 6).

The population of eastern spinner dolphins has been at about the same relative level in recent years as it was during the mid-1970s (Figure 7).

The two remaining stocks of spinner dolphins, the northern and southern whitebelly, also show a decline during the mid- and late seventies, dropping to a relative low in the early 80s, and recovering during the most recent years (Figures 8 and 9).

As regards the three stocks of common dolphins (northern, central, and southern), the data for estimating trends are very limited, and the estimates consequently poor. The relative abundance of the northern stock appears to have changed little since 1977 (Figure 10); for the central stock, the average has been downward since the late 1970s (Figure 11); and the southern stock appears to have become more abundant during the last three years, after declining to a relative low in 1982 (Figure 12).

In summary, nearly all of the stocks show a decrease in relative apparent abundance during the mid- and late 1970s, culminating in a relative low in the early 1980s, followed in turn by a recovery during the last three or four years. The exceptions to this pattern are the southern spotted and central common stocks, which show a downward trend in the most recent year or two.

IATTC Gear Program

The principal objective of the IATTC's gear program is to reduce dolphin mortality to the lowest possible level by assisting the international tuna purse-seine fleet in avoiding needless and careless killing of dolphins captured incidentally during fishing operations in the eastern Pacific Ocean. One important part of this program focuses on the gear and equipment used in these operations, and seeks ways of developing, disseminating, and promoting the use of gear which contributes to this objective. The main responsibilities of the IATTC gear staff involved in this program include:

1) Identification of gear problems associated with dolphin mortality that might be solved by new technology

2) Research and development of such technology

3) Educational extension services to improve the use of existing gear and procedures proven effective in reducing dolphin mortality

4) Making recommendations to member governments of the Commission and other nations whose vessels fish for dolphin-associated tuna concerning the use of dolphin-saving gear and procedures.

Dolphin mortality levels in the tuna fishery are primarily the result of two factors: the intensity of fishing effort on dolphin-associated tuna, and the mortality of dolphins in individual net sets. The IATTC gear program concentrates on minimizing the kill-per-set rates through the modification of those elements of the fishing process which cause dolphin mortality. The first step is the analysis of data collected by our sea-going technicians; these consist not only of statistics of dolphin mortality, but also include descriptions of dolphin release and rescue gear and procedures used by vessels and crew. By analyzing this information, it is usually possible to identify causes of high mortality - commonly lack of proper gear or misuse of same, lack of effort, or improper execution of dolphin release procedures - bring these to the attention of vessel personnel, and suggest solutions.

Some of our efforts are proving successful, and some not. Two of the unsuccessful experiments are worthy of mention, if only because of the considerable expenditure of time and money that was devoted to them. We first attempted to make use of the fact that tuna are known to associate not only with dolphins but also with floating objects such as tree trunks and other large items of marine debris. The idea was to determine whether man-made floating objects deployed in the areas where tuna-dolphin association is most common would attract the tuna away from the dolphins, thus enabling the fishermen to set on these objects rather than on dolphins. Anchored rafts were designed and deployed, but, although they did attract some tuna, these were smaller and less plentiful than those found in association with dolphins, and the experiment failed to produce the desired results.

The second experiment attempted to deal with the fact that during backdown the net sometimes closes in on itself, trapping the dolphins before they can be released. IATTC scientists collaborated with engineers and fishermen in attempting to develop a planing mechanism which would be attached to the sides of the net and keep it open during backdown, but so far all our efforts have been unsuccessful.

The IATTC staff hold meetings, workshops, and seminars with tuna industry and government fishery personnel in the major eastern Pacific tuna fishing ports of California, Ecuador, Mexico, Panama, and Venezuela. Causes of dolphin mortality and the use of proper fishing gear and procedures are explained and discussed, and literature and video tapes are distributed to vessel crews and managers and to the fisheries agencies of countries whose vessels fish for dolphin-associated tunas in the eastern Pacific Ocean.

In addition to promoting gear proven effective in reducing dolphin mortality, for the past three years the IATTC gear program has been providing many vessels of the international fleet with commercially-made high intensity floodlights for use during sets in which backdown is carried out in darkness. These night sets have higher mortality rates than day sets, and these lights, which were introduced into the U.S. fleet by the IATTC in 1981, have proved effective in reducing these rates by enabling the crews to see what they are doing and thus release and rescue dolphins trapped in the nets at night. Since 1986, U.S. flag vessels are required by law to carry these floodlights.

The gear program also offers a dolphin safety panel alignment service to any vessel of the international fleet. In order for dolphins to be released safely during backdown, the small-mesh dolphin safety panel in a vessel's net must be properly aligned. The IATTC's gear staff are experienced in the panel alignment procedure, which is recommended for all new vessels entering the fleet, for inactive vessels re-entering the fishery, and for vessels that have had certain net modifications made recently.

Recent Trends in the Fishery

Because of the much more intensive sampling during 1986 and 1987, particularly of the non-US fleet, the IATTC is able to examine in some detail recent trends in the fishery for tuna associated with dolphins.

Most notable in the samples are the increase in the effort on dolphin-associated tuna during 1985-1987, and the high mortality in 1986. Although the figures are still preliminary, it is evident that 1987 effort on dolphin-associated tuna was about 20% higher than in 1986 (Figure 3).

The estimated mortality for 1986, which was apparently substantial greater than in the preceding period, was of grave concern. Unfortunately the record catches of tuna during 1986 and 1987 were associated with higher mortalities on dolphins. Several factors contributed to these high levels of mortality: sets generally lasted longer, more of them were made at night, more sets involved species with higher mortality rates, and sizes of both dolphin herds and tuna schools were on average larger. All of these factors contributed to the higher levels of mortality during 1986. Improved cooperation between the IATTC and local governments and industries, together with the implementation of a joint program with the United Nations Environmental Program (q.v.), are yielding results that cause us to be cautiously optimistic. To illustrate in more detail some of these factors which affect dolphin mortality:

a) Night sets:

All sets in which backdown (the main dolphin release procedure) is carried out in darkness are classed as night sets. Although they usually constitute 10% or less of all sets, they are responsible for over 30% of the total mortality. In 1986, 40 floodlights acquired through the UNEP-IATTC program were distributed to the Latin American fleets. The increased use of the lights was probably one of the factors contributing to the decline in kill rates for night sets.

	1986	1987
Kill-per-set in night sets	37.0	20.7
Kill-per-ton in night sets	1.73	1.31

b) Percentage of dolphins captured that are killed:

Another index of fleet performance relative to dolphin mortality is the percentage of dolphins captured that die. The scientific technicians not only count the numbers of dolphins killed, but also estimate the total number of dolphins in the school. From these figures the percentages in the following table are calculated.

	1986	1987
Offshore spotted dolphins	0.066	0.036
Eastern spinner dolphins	0.173	0.056
Whitebelly spinner dolphins	0.224	0.127
Common dolphins	1.957	2.138

Except in the case of the common dolphin, these figures show a significant reduction over the 1986 percentages in 1987, but there is still ample room for improvement. One of the principal aims of the program is to achieve a continual reduction in these percentages.

c) Dolphins left in the net after backdown:

This also illustrates the success of the release effort; the fewer the animals left, the lower the kill rates. The deployment of rafts manned by crew members equipped with face masks and snorkels to check that all animals have been released before the backdown procedure is terminated has proved very effective in reducing the mortality, and the IATTC is encouraging captains to deploy these rafts in every set.

Number of animals left in net	1986	1987
Day sets	5.2	4.1
Night sets	12.7	6.9

d) Mortality rate changes:

The mortality rates of most major species and stocks of dolphins were considerably lower in 1987 than in 1986.

Mortality per set	1986	1987
Offshore spotted dolphins	8.4	4.9
Eastern spinner " "	8.2	3.4
Whitebelly " "	9.1	5.7
Common dolphins	32.5	32.9

According to our estimates, the total mortality decreased by about 20% in 1987, in spite of the 20% increase in sets on tuna associated with dolphins.

UNEP-IATTC Joint Program

Since late 1985 the IATTC has worked jointly with the United Nations Environment Program in a program, funded primarily by UNEP, whose objectives are to contribute to regional cooperation among Latin American nations to reduce dolphin mortality and to develop awareness of all problems related to the management and conservation of marine mammals of the region.

Although the program concentrated its action on the tuna fishing nations, it encompassed all of Latin America. It is our belief that our interests in the conservation of dolphins, and indeed marine mammals in general can be best served through expanded educational programs for scientists, governments, and industry. This approach may appear to be slower and less effective than impulsive short-term measures, but it has great potential to produce stable and long-lasting solutions to the problems which confront us.

Final remarks

Mr. Chairman, in your letter inviting me to testify before this Committee you expressed an interest in my views on the following five points: 1) observer coverage; 2) comparability; 3) skipper performance; 4) the banning of sundown sets; and 5) phasing out the U.S. quotas for dolphin over a four-year period. I shall comment on each of these issues in that order.

1) Observer coverage

I would like to call attention to various statements that have been made to the effect that nobody knows how many dolphins are being killed and/or that the estimates of kill are worthless. The information in this report will, I trust, suffice to disprove such unfounded claims. As noted above, the IATTC runs a major international program devoted to both understanding and resolving the tuna-dolphin problem. Every nation which has vessels operating in the eastern Pacific participates voluntarily in the IATTC's programs; this includes both member and non-member nations of the IATTC.

More than 33% of all fishing trips made in this ocean area during which tuna associated with dolphins are captured are accompanied by technicians who observe the activities aboard the vessel and estimate the mortality of dolphins. This is a statistically significant level of sampling, and permits a high degree of accuracy and reliability in the resulting estimates, provided always that the necessary sampling assumptions are valid. The IATTC produces the only scientifically sound, and therefore obviously the best, estimates of the dolphin mortality generated by the international fleet fishing in the eastern Pacific.

It has often been claimed that the true figures for dolphin mortality are much greater than our estimates. Such accusations are often apparently based on little more than waterfront hearsay, and in a few instances refer to affidavits from former observers who claim they falsified their records. I am aware of only one instance where this has been stated in an affidavit; in other words, one observer out of many, who between them have covered some 1,500 trips since the program began. Although there is undoubtedly some error in the estimates of mortality, we believe it to be minimal, and are constantly striving to make the estimates more accurate. There are two major sources of possible error or bias. The first arises from the assumption that there is no difference between trips that are observed and those that are not. We have no evidence to suggest that there is a difference, and in fact most of our evidence indicates that there is none, but the only way to be certain of this would be to have an observer aboard on every single trip. The second possibility has to do with observers falsifying their records, which is more difficult to evaluate. We are aware that pressure may be brought to bear on them, and we do our best to train them to deal with it. All IATTC observers undergo intensive training courses, which prepare them for, and show them how to cope with, situations they may encounter during the voyage. The observers are also thoroughly debriefed at the end of each trip, and the data they collect are subjected to analyses designed to detect abnormalities and inconsistencies.

2) Comparability

The estimates of mortality derived by the Commission from the data collected through the international observer program are divided by flag, by species or stock, and by area. Commission estimates of observed kill, total kill, kill-per-set, kill-per-ton, etc., can be used to compare the performance of vessels of one nation with those of another. The Commission can, and does, provide to each nation the statistics on fishing and dolphin mortality required by the United States for evaluating performance, and hence comparability. I might add, Mr. Chairman, that our figures indicate that in 1986 and 1987 (the years for which we have the most reliable data) the kill rates of the non-U.S. fleet were generally substantially higher than those of the U.S. fleet. The comparability we are discussing here is based on absolute values of the various variable factors, and ignores their statistical variability. This is a simplification which allows a direct analysis, but does not make for a proper statistical comparison. The values we are dealing with are statistical estimates obtained from a sample of all the trips made by tuna boats. We do not know the exact values for the whole fleet, and so try to estimate them as accurately as possible, but there is always a margin of error. There is a random element in the sampling, and thus the estimates may be higher or lower than the real value. The comparisons must thus be done using statistical tests, which do not simply observe that one number is higher than another and draw conclusions from this, but take into account the natural variability of the values when making the comparison. To be considered truly different, numbers have to be *significantly* different. That significance is an objective statistical property: it does not reflect whether a number is larger than another, or by how much, but reflects the probabilistic comparison of numbers that are not exact but subject to variability. To have proper scientific validity, a comparison must be made using a statistical test.

It should be remembered that the crews of many of the non-U.S. vessels have had limited experience in fishing for tuna associated with dolphins, whereas many of the U.S. crews have been fishing for such schools of tuna for many years. We need to accelerate the transfer to non-U.S. crews of information on fishing gear and techniques that have proven effective in reducing dolphin mortality. As already noted, the IATTC is trying to accomplish this through its current program, but the non-U.S. crews and governments need time to assimilate this information and to implement the necessary changes. It should also be remembered that it is only during the last two and a half years that all of the nations of the region have been participating in the IATTC's program, and that during that time substantial progress has been made in determining the extent of the problem and in making the equipment and techniques which reduce the mortality available to all vessels involved in the fishery. In general, the performance of non-U.S. vessels in 1987 with respect to reducing dolphin mortality shows an apparent improvement over 1986, and it appears that it will continue to improve in 1988. I would like to think that the Commission's Tuna-Dolphin Program has in some way contributed to this improved record.

This program has several goals, but it is fundamentally dedicated to reducing the dolphin kill to the lowest level possible. Progress has been made in this respect, but there is much yet left to do. With the cooperation of many of the vessel owners, fishing gear and techniques designed to reduce dolphin mortality have been introduced. At the 44th Meeting of the IATTC, a resolution was unanimously passed which called on governments to require their flag vessels to incorporate certain dolphin-saving techniques into their methods of fishing. Some nations - Mexico and Ecuador, for instance - have already implemented legislation which includes most of the recommendations in this resolution; others are in the process of doing so. Any action that would further the adoption of the IATTC recommendations by all nations whose vessels participate in this fishery would contribute to the reduction of dolphin mortality; anything which would serve to support the continued participation of all nations in the IATTC's Tuna-Dolphin Program would contribute to a better understanding of the problem and to its eventual reduction. Any decision or action which made any nation reluctant to participate in this program, or to withdraw from it altogether, would inevitably constitute a setback to the common goal of reducing dolphin mortality to the lowest level possible.

3) Skipper performance

Three major factors affect the performance of skippers with respect to dolphin mortality: their motivation, their professional competence, and external factors such as gear malfunctions and weather. Generally, the more motivated and competent they are, the better their record on dolphin mortality. The IATTC is collaborating with governments and the industry in an attempt to increase motivation and raise standards of competence further. As regards the former, we are constantly urging vessel owners to assign the reduction of dolphin mortality a very high priority in their dealings with their skippers, and also speaking directly to the skippers and emphasizing the importance of reducing this mortality. And as regards professional competence, the Commission is working with the owners and captains to set up panels of expert skippers and technicians to evaluate the performances of their peers, and pass on the benefits of their knowledge and experience to others. Such consultative and advisory panels have been very successful in reducing the mortality in the U.S. tuna fleet, and the Commission staff feels that they can be an effective tool for increasing the skippers' awareness of the problem and helping them to improve their performance. Information collected through the Commission's observer program is used to evaluate and compare how individual skippers perform and to identify those situations that require attention and improvement.

It is more difficult to predict the effect of external factors such as gear and weather on dolphin mortality. However it seems obvious that vessels which are in good repair and whose equipment operates well have better success in releasing dolphins alive from the net. A classic example of the disaster that a poorly kept vessel can cause, was shown in the film taken aboard a non-U.S. vessel and viewed on national television a few months ago. The vessel in question was in deplorable condition, its gear continually malfunctioned, and its crew was apparently either inexperienced, incompetent or unmotivated or all three. Consequently the vessel had a high kill of dolphins. It is my opinion that the vessel should not have been fishing tuna in association with dolphins.

If persistent attempts are made to improve the performance of skippers who experience consistently high dolphin kills and these attempts are unsuccessful then at some point the opportunity for that skipper to continue to fish for tuna in association with dolphins should be limited.

4) Banning sundown sets

Sundown sets comprise about 10% of all sets made by the international fleet but account for about 30% of all dolphin mortality. The use of high-intensity lights during these sets helps to lower the kill, but they nevertheless continue to suffer higher kill rates than daytime sets. Further research is needed to develop methods of reducing dolphin mortality in sundown sets. It is very probable that if no sundown sets were made, the kill rates would improve considerably.

5) Phasing out the U.S. dolphin kill quota

Given the current purse-seine fishing technology, it is in my opinion impossible to catch dolphin-associated tuna without killing some dolphins in the process. It is also unlikely that any alternative form of gear, of equal efficiency but harmless to dolphins, will be developed in the near future although there is an urgent need for research in this area. If the United States institutes a zero-kill quota, then it is highly probable that most U.S. vessels will change flag or fish elsewhere. In that case the U.S. kill would indeed go to zero, but the overall dolphin mortality in the eastern Pacific fishery would not only not decrease, it would probably increase.

I base this statement on the following reasoning: if the United States institutes a zero-kill quota, U.S. vessels will no longer operate in the fishery. The United States will require that other nations wishing to continue importing tuna from the eastern Pacific also set a zero-kill quota, which they will be unable or unwilling to do, preferring to develop markets elsewhere. They will then have less reason to cooperate in the international program, and the net result would be no estimates at all of the kill of dolphins by those countries, and no assessment whatever of the impact of their vessels on the dolphin populations. Indeed, the kill of dolphins could very likely increase, because there would be no mechanism for disseminating information on methods of reducing dolphin mortality.

It should also be kept in mind that there are several nations that do not trade with the U.S. and do not presently fish tuna in the eastern Pacific but are capable of doing so. Restrictions on imports into the U.S. would have little effect on their decision to harvest tuna in association with dolphins.

In conclusion, Mr. Chairman, I would like to say that it is right that the United States should take the lead and set standards, but these standards must be realistic if they are to achieve the desired results. It would be neither reasonable nor practical to set standards that cannot be met, and provision must be made for these other fleets to reach the level of expertise exhibited by the highly efficient and experienced U.S. fleet. Only through such a reasoned and practical approach can we accomplish the goal that we are all seeking, the reduction of dolphin mortality to the lowest possible levels.

Thank you, Mr. Chairman.

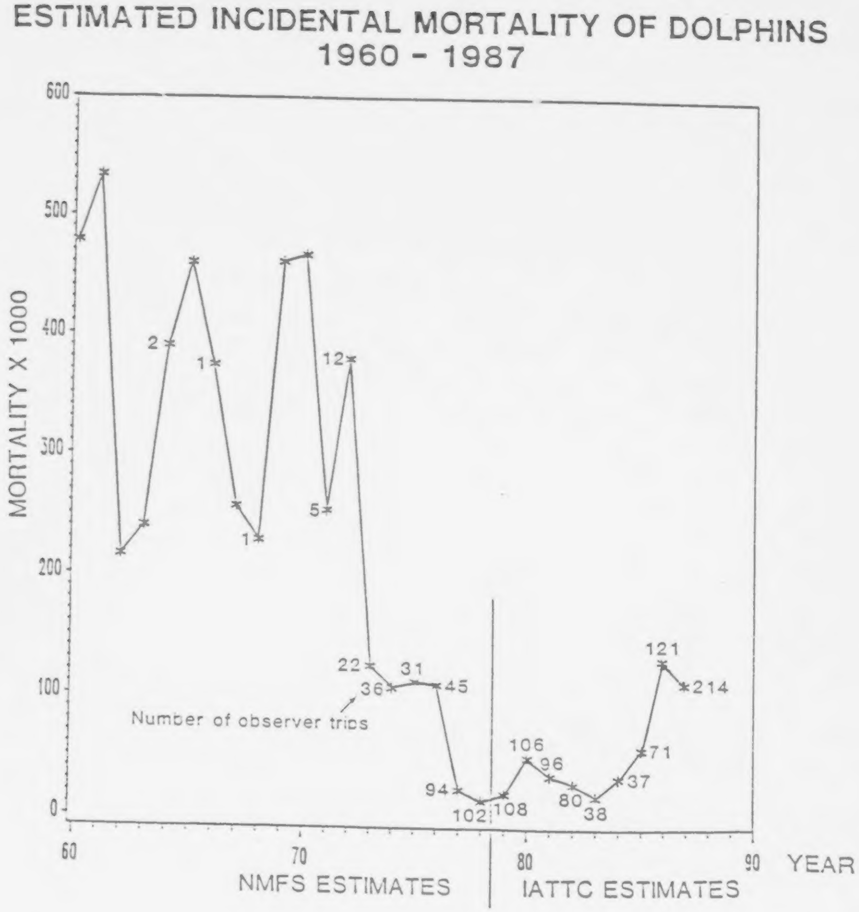


Figure 1. NMFS mortality estimates for the period 1960-1978, and IATTC mortality estimates for 1979-1987.

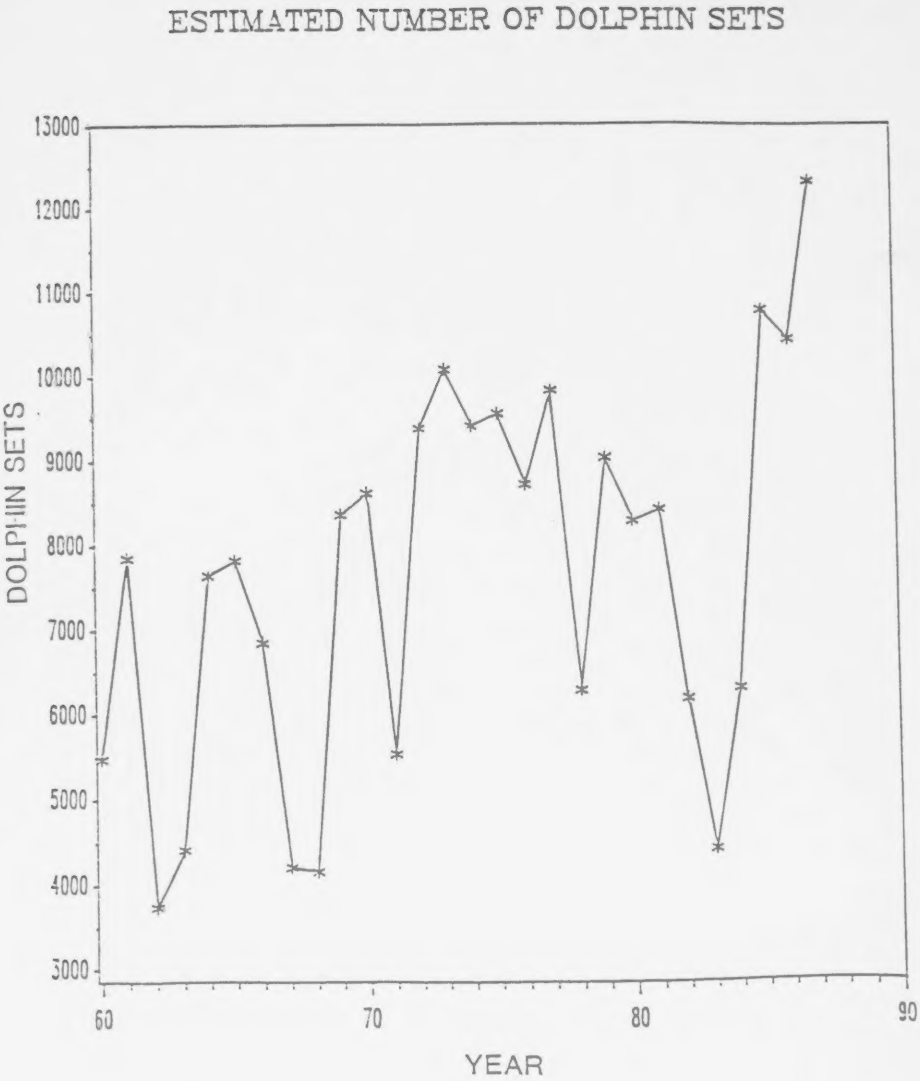


Figure 2. Estimated number of sets on tuna associated with dolphins for the period 1960-1987, by year.

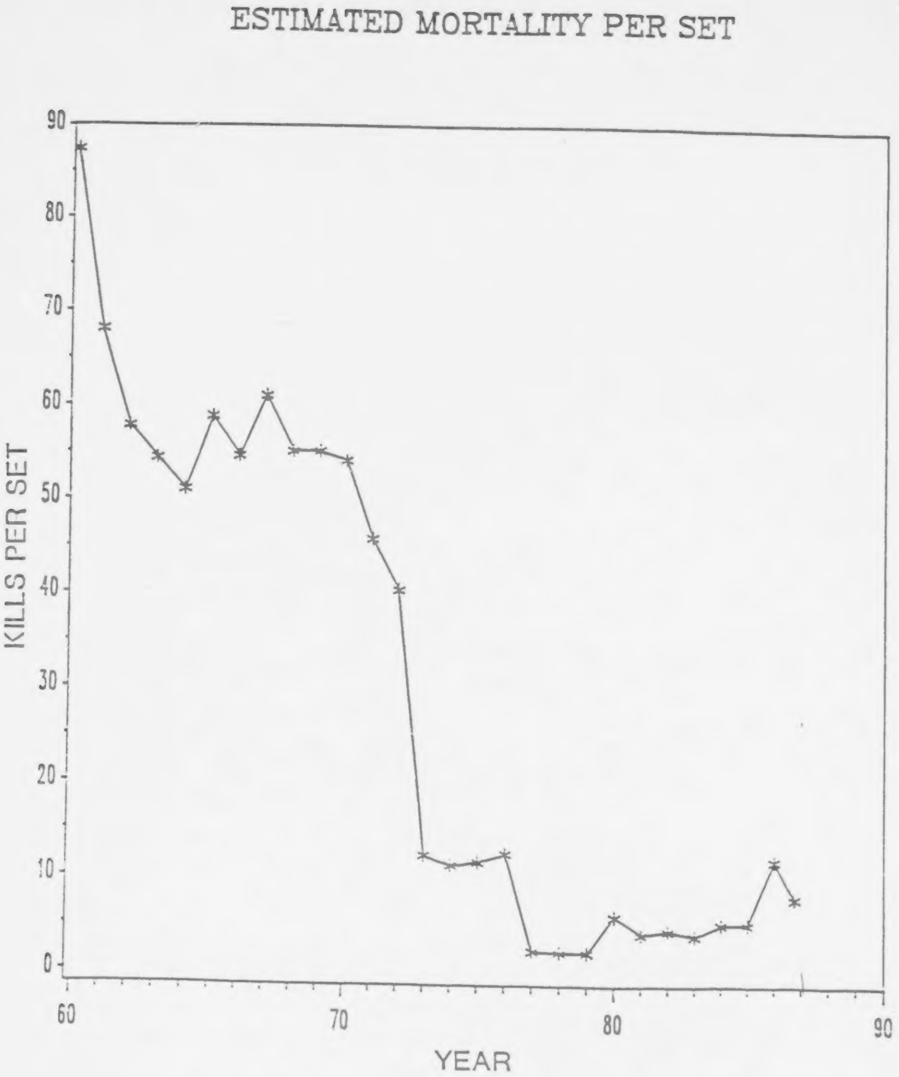


Figure 3. Estimated mortality per set on tuna associated with dolphins (kill-per-set).

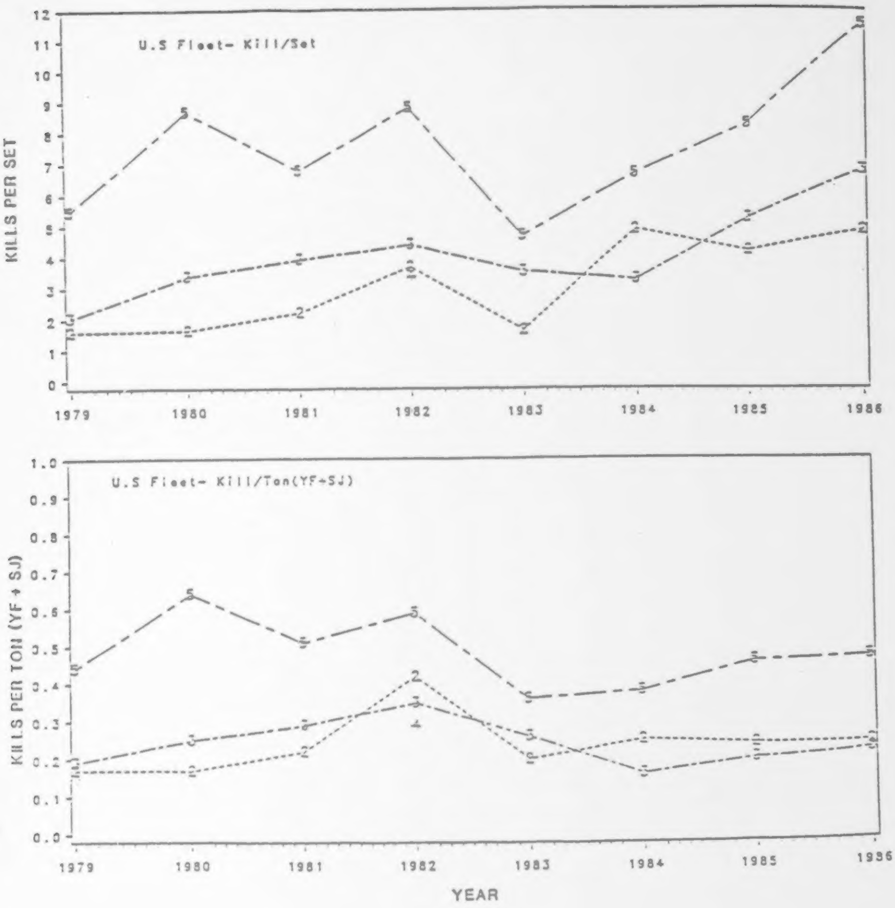


Figure 4. Estimates of kill-per-set and kill-per-ton for the U.S. tuna fleet in the eastern Pacific Ocean, 1979-1986.

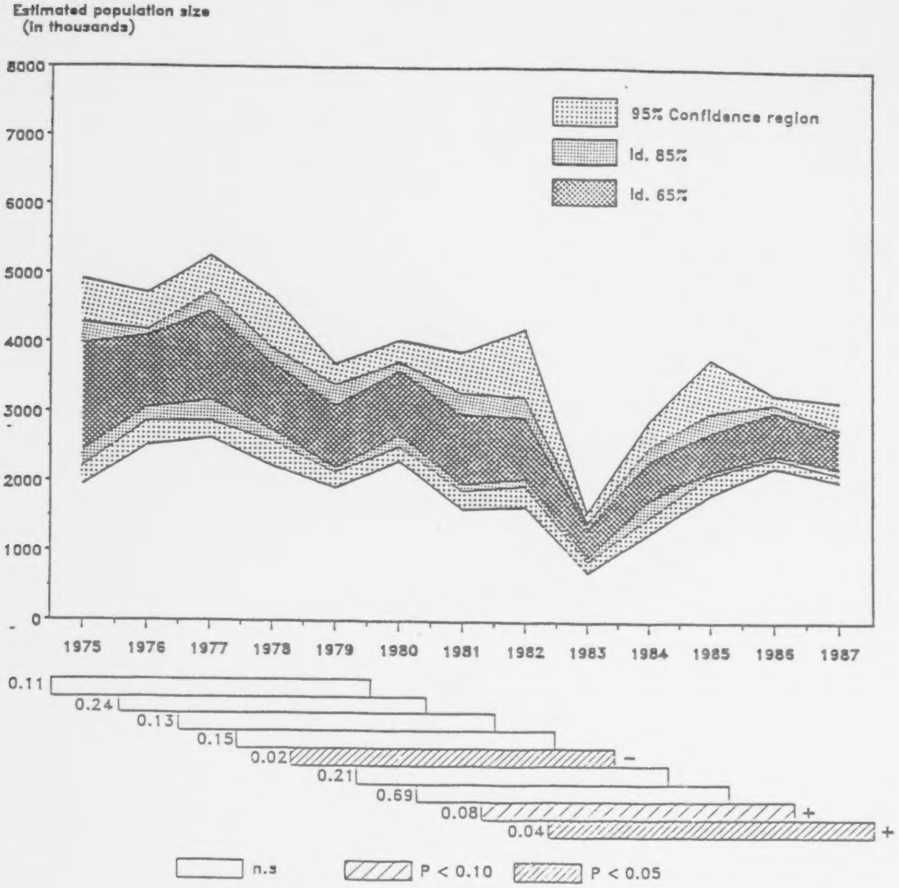


Fig.5. Confidence regions and test for trends for the northern stock of the spotted dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

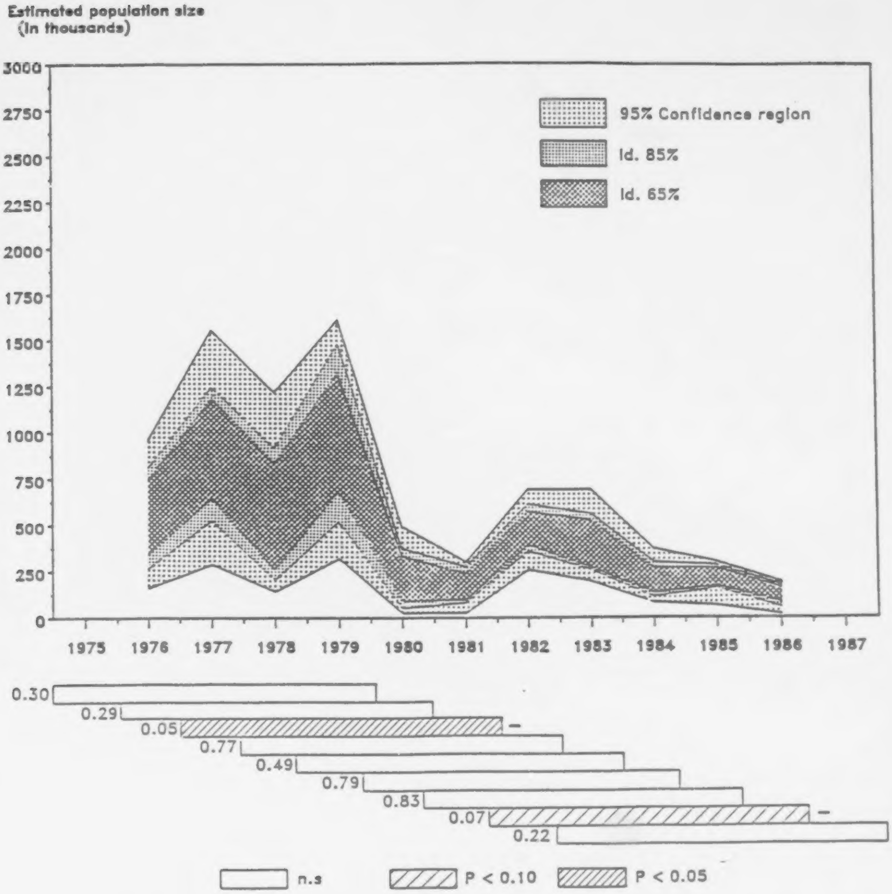


Fig.6. Confidence regions and test for trends for the southern stock of the spotted dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

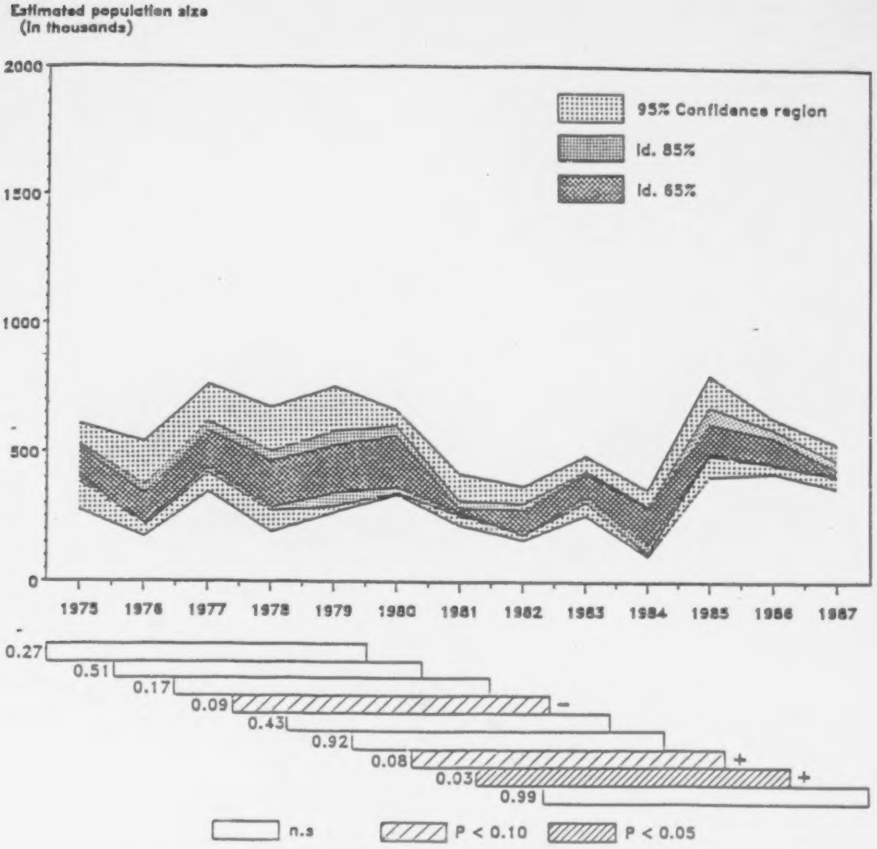


Fig.7. Confidence regions and test for trends for the eastern stock of the spinner dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

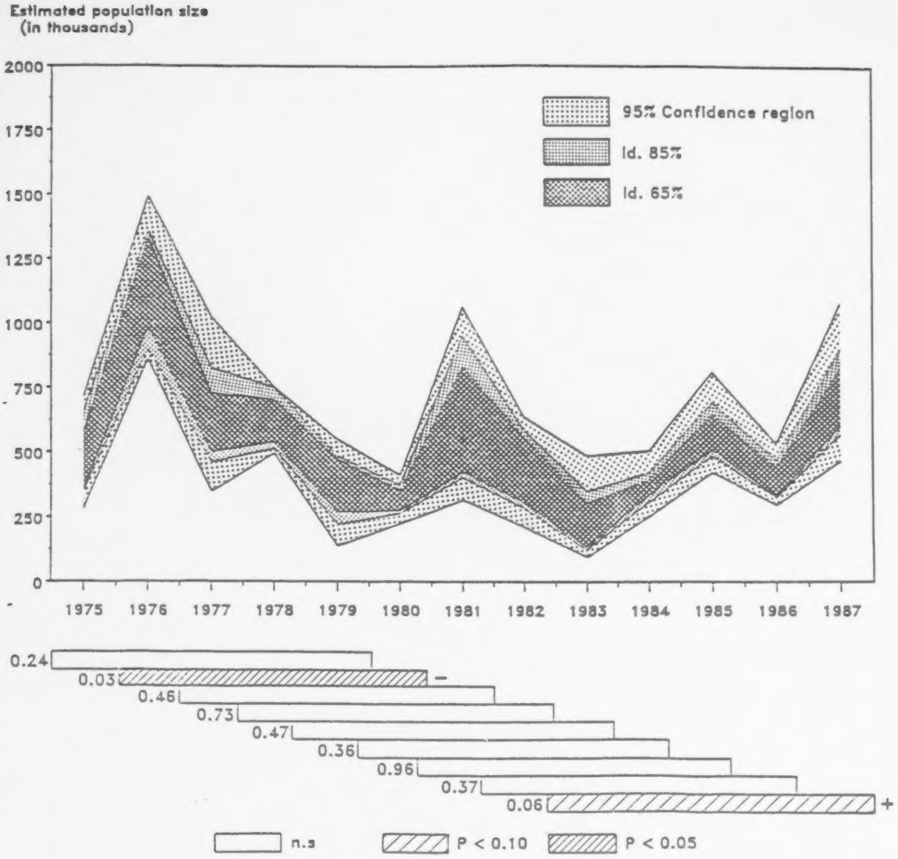


Fig.8. Confidence regions and test for trends for the northern whitebelly stock of the spinner dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

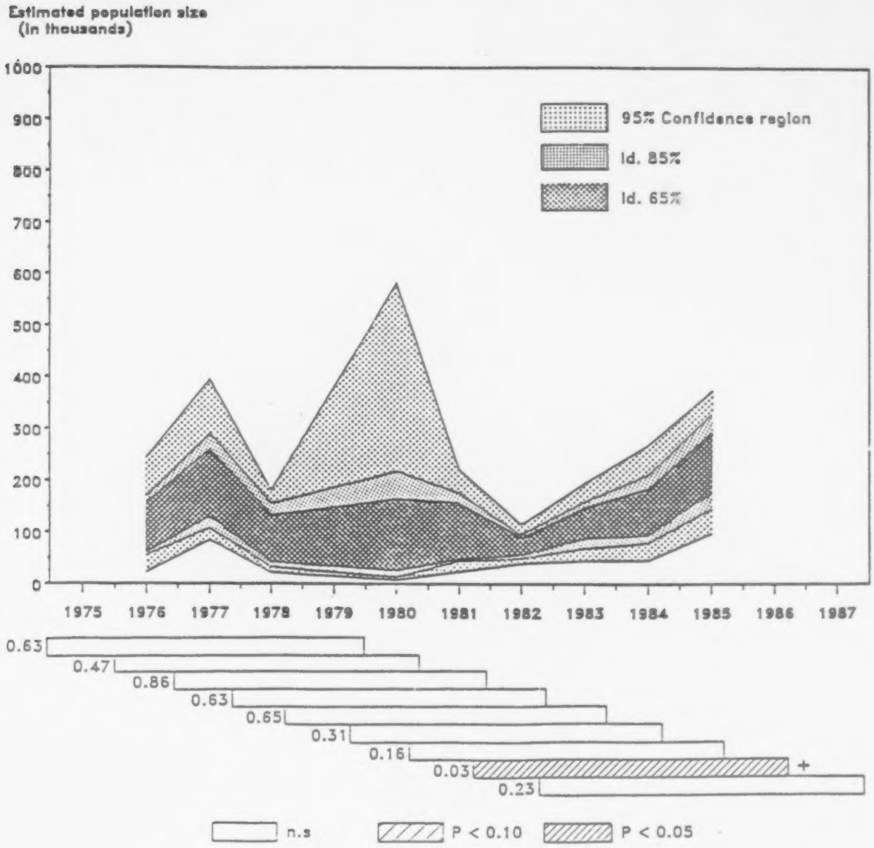


Fig.9. Confidence regions and test for trends for the southern whitebelly stock of the spotted dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

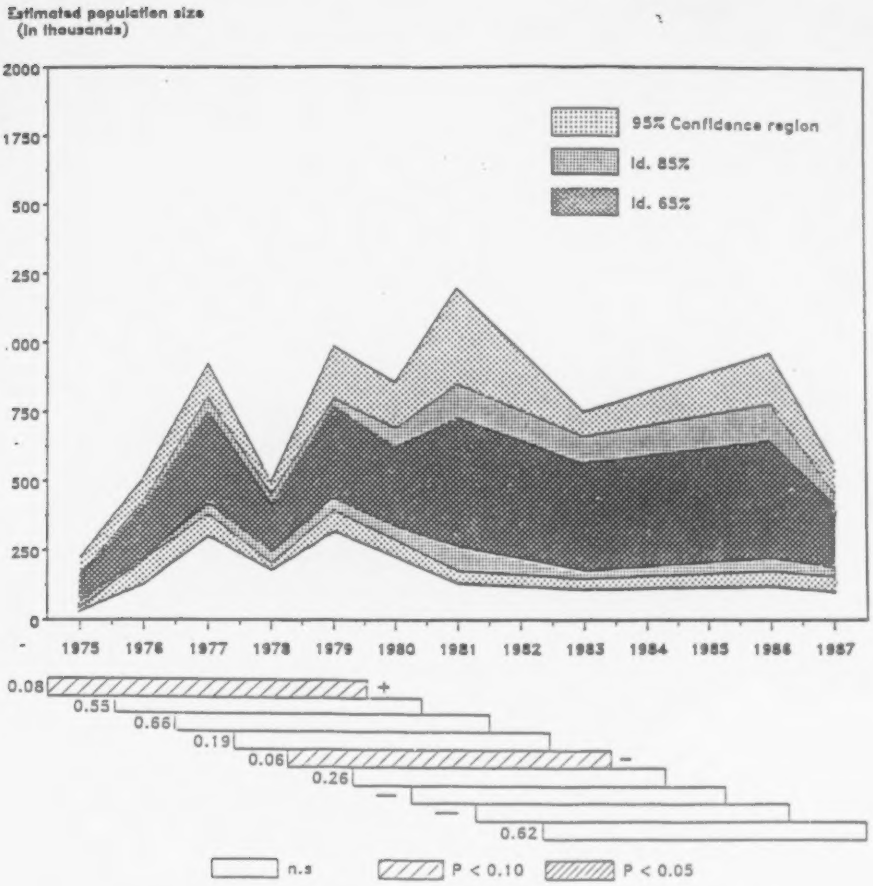


Fig.10. Confidence regions and test for trends for the northern stock of the common dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

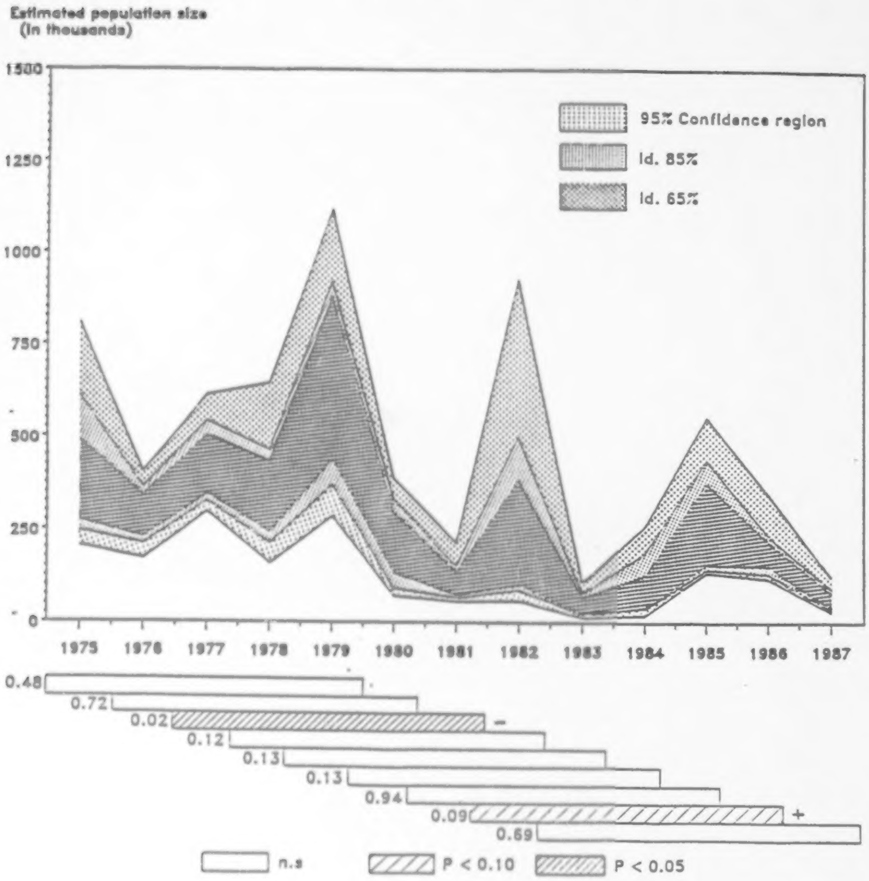


Fig.11. Confidence regions and test for trends for the central stock of the common dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

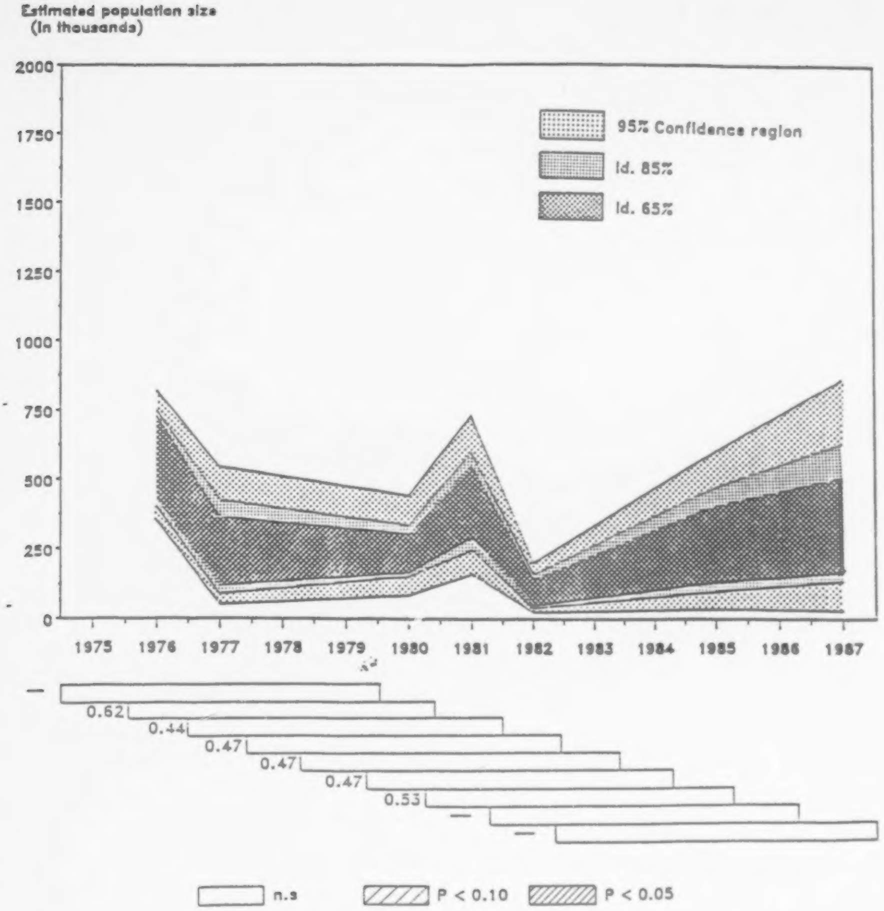


Fig.12. Confidence regions and test for trends for the southern stock of the spotted dolphin. The bars summarise results on tests for linear trends for five-year periods. Numbers on the left of the bars are the corresponding p-values. If trends are significant a + or - sign at the right indicates direction of trend.

Table 1. Numbers and percentages of purse seine vessels of capacity greater than 300 short tons that fished in the eastern Pacific Ocean, by flag and in the indicated year. The 1988 data are preliminary.

	1970		1972		1974		1976		1978		1980		1982		1984		1986		1988	
Flag	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bermuda	0	0.0	2	1.6	2	1.4	5	2.8	5	2.8	2	1.1	2	1.2	0	0.0	0	0.0	0	0.0
Canada	6	6.5	5	3.9	6	4.1	5	2.8	5	2.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cayman Is.	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.6	3	1.8	1	<1.0	0	0.0	0	0.0
Congo	0	0.0	0	0.0	0	0.0	0	0.0	2	1.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Costa Rica	0	0.0	1	<1.0	1	<1.0	1	<1.0	5	2.8	5	2.7	2	1.2	1	<1.0	1	<1.0	0	0.0
Ecuador	2	2.1	2	1.6	0	0.0	0	0.0	2	1.1	6	3.3	4	2.4	6	5.5	6	5.3	6	4.5
El Salvador	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.2	0	0.0	1	<1.0	2	1.5
France	0	0.0	3	2.3	2	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Japan	0	0.0	2	1.6	1	<1.0	1	<1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Korea	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	<1.0	0	0.0	0	0.0	2	1.8	0	0.0
Mexico	1	1.1	5	3.9	10	6.8	19	10.9	19	10.8	40	21.7	40	24.1	44	40.0	43	38.1	51	38.1
Netherlands	0	0.0	0	0.0	2	1.4	2	1.1	8	4.5	3	1.6	0	0.0	0	0.0	0	0.0	0	0.0
New Zealand	0	0.0	0	0.0	0	0.0	1	<1.0	1	<1.0	1	<1.0	0	0.0	0	0.0	0	0.0	0	0.0
Nicaragua	0	0.0	0	0.0	0	0.0	2	1.1	2	1.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Panama	3	3.3	5	3.9	8	5.4	6	3.4	5	2.8	6	3.3	4	2.4	1	<1.0	1	<1.0	5	3.7
Peru	0	0.0	0	0.0	0	0.0	2	1.1	6	3.4	6	3.3	0	0.0	0	0.0	0	0.0	0	0.0
Senegal	0	0.0	0	0.0	0	0.0	3	1.7	3	1.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Spain	1	1.1	4	3.2	5	3.4	7	4.0	4	2.3	4	2.2	3	1.9	1	<1.0	2	1.9	1	<1.0
U.S.A.	79	85.9	98	77.2	110	74.8	119	68.7	106	60.2	102	55.5	99	59.7	44	40.0	39	34.5	39	29.1
U.S.S.R.	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.2	1	<1.0	0	0.0	0	0.0
Vanuatu	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	2.7	6	4.5
Venezuela	0	0.0	0	0.0	0	0.0	1	<1.0	3	1.7	5	2.7	5	3.0	11	10.0	15	13.3	24	17.9
Total - non-U.S.	13	14.1	29	22.8	37	25.2	55	31.3	70	39.8	82	44.5	67	40.3	66	60.0	74	65.5	95	70.9
Total - U.S.	79	85.9	98	77.2	110	74.8	119	68.7	106	60.2	102	55.5	99	59.7	44	40.0	39	34.5	39	29.1

STATEMENT OF
WILLIAM W. FOX, JR., COMMISSIONER
MARINE MAMMAL COMMISSION
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE, CONSERVATION AND THE ENVIRONMENT
COMMITTEE ON MERCHANT MARINE AND FISHERIES
UNITED STATES HOUSE OF REPRESENTATIVES
8 SEPTEMBER 1988

REAUTHORIZATION OF THE MARINE MAMMAL PROTECTION ACT

Good morning, Mr. Chairman and members of the Committee. My name is William Fox and I am Chairman of the Marine Mammal Commission. I am Professor of Marine Science and Director of the Cooperative Institute of Marine and Atmospheric Studies at the University of Miami. From 1978 through 1982 I was Director of the Southeast Fisheries Center of the National Marine Fisheries Service. Before that, I was chief of the division with responsibility for the tuna-porpoise research program at the Southwest Fisheries Center in La Jolla, California.

I understand that you would like my views on steps that might reasonably be taken to achieve the Marine Mammal Protection Act's goal that the kill and serious injury of porpoise incidental to the yellowfin tuna purse seine fishery in the eastern tropical Pacific be reduced to insignificant levels approaching a zero mortality and serious injury rate. Specifically, I understand that you would like me to comment on: (1) what might be achieved by developing and adopting performance standards for U.S. tuna purse seine vessels and operators; (2) what might be achieved by banning sundown sets; (3) what level of observer coverage is necessary to accurately monitor the nature and magnitude of the incidental porpoise take and to insure that vessel operators comply with applicable regulations; (4) the adequacy of steps being taken to encourage other nations to adopt porpoise-saving measures comparable to those of the United States; and (5) what might realistically be achieved by reducing and eventually eliminating the quotas allowing the take of marine mammals by the U.S. tuna purse seine fleet.

Available information indicates that much of the incidental kill and serious injury of porpoise is due to relatively infrequent disaster sets in which large numbers of porpoise are entrapped and drowned in fishing nets. These disaster sets can be caused by a variety of things including equipment malfunction and inexperienced or poorly trained crews. In this context, it is apparent that the variables which most affect porpoise take rates are the skill and the desire of the crew--particularly the captain--to avoid killing porpoise, and the quality and maintenance of the fishing vessel and gear. Therefore, one way to further reduce the incidental mortality and serious injury of porpoise by the U.S. tuna purse seine fleet would be to decertify vessels and captains that consistently kill or injure substantially more porpoise than the average vessel and captain. For this reason, the Commission believes it would be desirable to develop and implement a system that will establish basic performance standards and require that certificate holders (i.e., both vessels and captains) demonstrate proficiency in meeting those standards with respect to the use of the best available porpoise-saving gear and techniques. Also, the Commission believes that the effectiveness of such standards might be enhanced by allocating the allowable take equitably among the vessels in the fleet--i.e., to establish and enforce individual vessel quotas.

Banning sundown sets is another thing that could reduce the incidental kill and serious injury of porpoise. Available data indicate that more porpoise are likely to be killed in sets late in the day and at night, when porpoise in the backdown channel cannot be effectively seen and monitored, than during daylight hours. I question, however, whether the increased probability of killing porpoise during sundown sets can be effectively avoided by prohibiting the deployment of net skiffs later than 30 minutes before sunset as has been suggested by Congressional Staff. To be effective, it may be necessary to prohibit deployment of net skiffs later than 60 or 90 minutes, rather than 30 minutes, before sunset. I therefore suggest that you have your staff consult the National Marine Fisheries Service and representatives of the U.S. tuna purse seine fleet to determine the range of times generally required to complete backdown and remove live porpoise after the net skiff is launched and to modify the time rule as necessary to insure that backdown can be completed while it still is light enough to see and monitor the backdown channel effectively.

The presence of observers aboard fishing vessels may result in a decrease in the incidental kill and serious injury of porpoise. Thus, observers may serve at least two important functions: (1) gathering information necessary to estimate the number, species, age, sex and reproductive condition of porpoise killed and seriously injured during purse seine operations; and (2) insuring that fishermen comply with existing regulations and do their best to avoid killing or injuring porpoise. Information gathering probably can be done effectively by placing observers randomly aboard a representative subset of fifty percent or less of the trips by tuna purse seiners engaged in the yellowfin tuna fishery in the eastern tropical Pacific. However, ensuring that all vessels comply fully with all relevant porpoise saving measures may require placement of observers aboard most if not all purse seiners involved in the fishery.

As I understand it, more than sixty percent of the tuna taken and more than eighty percent of the porpoise now being killed or seriously injured in the eastern tropical Pacific are being taken by foreign purse seiners. In many cases, these foreign flag fishermen are not required to employ the porpoise-saving measures required of U.S. purse seiners, and have not demonstrated the ability to meet the performance standards generally being met by the domestic fleet. Thus, efforts by the United States fishing industry and the U.S. Government to reduce overall mortality and serious injury have been seriously compromised by foreign activities.

Recognizing that efforts to protect porpoise stocks in the eastern tropical Pacific would be unsuccessful unless other countries can be encouraged to develop porpoise-saving programs comparable to ours, Congress amended the Marine Mammal Protection Act in 1984 to require that countries exporting yellowfin tuna to the United States provide documentary evidence that (1) the nation has adopted a regulatory program governing the incidental taking of marine mammals that is comparable to the program of the United States; and (2) the average rate of incidental mortality by its fishing vessels is comparable to the rate of incidental marine mammal mortality by the U.S. tuna purse seine fleet operating in the eastern tropical Pacific. This past March, the National Marine Fisheries Service adopted interim regulations to implement the amendment.

The Commission believes that the proposed regulations are on the right track but that presently available information is insufficient to judge whether they will be successful. Although it is reasonable to use average catch rates as the basis for making comparability determinations, it is important to recognize that the number of foreign purse seiners fishing in the eastern tropical Pacific has been increasing and that reducing the incidental catch rate may not result in the actual incidental kill and serious injury of porpoise being reduced to levels which will prevent the affected stocks from being depleted or allow depleted stocks to recover. That is, although the catch rate may be reduced, the number of porpoise killed and injured could increase if the sizes of the various fishing fleets, the fish catch, or the number of sets on porpoise increase.

It also is important to recognize that there are differences in the rates at which various species and stocks of porpoises are taken by the U.S. tuna fleet and that these rates may be affected by individual stock quotas imposed on the U.S. fleet. Similarly, it is important to recognize that some species and stocks have been affected more than others and that the various fishing fleets may fish in different localities and thus interact with the various affected porpoise stocks to different degrees. Therefore, the determination of comparability of incidental take rates by foreign and U.S. fleets must be made on a stock-by-stock basis.

In addition, the replacement yield of each of the affected porpoise stocks should be estimated, using the best available data. These estimates then should be compared to the best available estimates of the present combined incidental take by the U.S. and foreign purse seine fleets, and to the estimated combined take assuming foreign fleets achieve incidental take rates comparable to the U.S. fleet, to determine whether the proposed comparability standard is likely to prevent the affected porpoise stocks from being reduced or maintained below optimum sustainable levels and, if not, the maximum allowable take or combined U.S./foreign quota that would do so.

Banning sundown sets, establishing and enforcing performance standards, requiring other countries to adopt comparable porpoise-saving programs if they want to export tuna to the United States, and placing observers aboard representative subsets of both the U.S. and foreign purse seine fleets should result in a substantial reduction in the overall incidental take of porpoise in the eastern tropical Pacific. It also should encourage fishermen to continue efforts to develop fishing gear and practices which will further reduce the incidental kill and serious injury of porpoise and, perhaps, to seek alternatives to the practice of "setting-on-porpoise" to catch the large yellowfin tuna which frequently are found in association with porpoise schools. Consequently, there is reason to believe that it may be both technically and economically feasible for both the U.S. tuna fleet and foreign tuna fleets to reduce their incidental kill and serious injury of porpoise.

Although it may be both technically and economically feasible to further reduce the incidental take of porpoise, the available catch data and other information must be evaluated to determine what level of reduction might be technically and economically feasible. The Commission therefore suggests that the National Marine Fisheries Service, in consultation with the Commission and representatives of the U.S. tuna purse seine fleet, conduct this analysis.

With regard to this last point, it is my understanding that one or more groups have proposed phasing out the allowable take of porpoise by the U.S. purse seine fleet over the next four years. The proposal assumes that, if the U.S. fleet is no longer allowed to take porpoise, the comparability requirement mandated by the 1984 amendment to the Marine Mammal Protection Act would require that other countries likewise prohibit the incidental taking of porpoise by their nationals.

The Commission shares the view that more could and should be done to reduce the incidental take of porpoise, particularly by foreign fleets. We question, however, whether phasing out of the allowable take by the U.S. fleet would in fact reduce or eliminate the incidental take of porpoise by foreign fleets. In fact, it likely would do so only to the extent that the foreign purse seine fleets are dependent upon the United States as the market for their catch. If, as appears to be the case, substantial markets exist outside the United States or new markets can be developed, the primary effect of a four-year phase-out of the allowed U.S.

take of porpoise likely would be to put U.S. fishermen at a competitive disadvantage in world markets.

* * * * *

I hope that these comments have been helpful. Thank you for having invited me to testify.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

Office of Legislative Affairs

August 11, 1988

Honorable Gerry Studds
Chairman
Subcommittee on Fisheries and
Wildlife Conservation and the
Environment
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Studds:

We are pleased to respond to your questions resulting from the May 10, 1988 hearing on Marine Mammal Protection Act Reauthorization.

If you, or your staff, require additional information, please let me know.

Sincerely,

B. Kent Burton
Director

Enclosure

QUESTIONS AND ANSWERS FOR THE RECORD
IN FOLLOWUP TO THE HEARING ON
MMPA REAUTHORIZATION
ON MAY 10, 1988
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND
WILDLIFE CONSERVATION AND THE
ENVIRONMENT

Questions From Congressman Studds

Question 1:

In 1984, Congress amended the MMPA to require that each foreign nation involved in harvesting tuna with purse seines in the eastern tropical Pacific Ocean provide documented evidence to the United States that it has a) adopted regulatory program governing the incidental taking of marine mammals in the course of such harvesting that is comparable to that of the United States, and that b) the average rate of incidental take by its vessels is comparable to that of U. S. vessels. Failure to meet these standards requires the Secretary of the Treasury to ban the importation of commercial fish or products from that foreign nation. This requirement became effective July 17, 1984.

On May 21, 1986, the National Marine Fisheries Service announced its decision that Mexico was in "substantial compliance" with the MMPA and lifted the MMPA tuna importation ban that had been imposed in 1981.

a. What was the mortality level of porpoise in Mexico's purse seine operations at the time the embargo was lifted? How did Mexico's mortality level compare with the mortality level in the U. S. fleet? How do the mortality levels of the two fleets compare now? How did the mortality levels compare at the time the 1984 amendments to the MMPA became law?

b. Please provide the 1984 porpoise mortality level of the tuna fleet of each nation that exports yellowfin tuna to the U.S., the present mortality level of these fleets, and the mortality level NMFS believes will meet the requirements of comparability standard mandated in the 1984 amendments to the MMPA.

c. At the hearing Mr. Fullerton noted that "We started in 1984 to require the (tuna producing) nations to adopt (tuna-porpoise) regulations, but not to meet the requirements of comparability as far as kill-per-ton. And that's the reason we embargoed Mexico in 1986." What were the specific circumstances under which Mexico was embargoed in 1986?

ANSWER: (a) A tuna embargo against Mexico imposed in 1980 under the Magnuson Act following that nation's seizure of a U.S. tuna vessel. A similar prohibition was imposed under the Marine Mammal Protection Act (MMPA) shortly thereafter when Mexico failed to submit documentation required under that Act. The MMPA embargo was removed in 1986. In their submission, Mexico reported a total of 877 porpoise were killed in 1984. The U.S. mortality that year was 14,400. The two estimates are not comparable because U.S. mortality figures are estimated from U.S. observer reports while Mexico's was apparently based upon interviews with skippers and/or logbook inspections. The NMFS does not accept logbooks or vessel skipper interviews as acceptable sources for porpoise mortality estimates. In response to the other questions, NMFS will be able to make a comparison of mortality between the Mexico fleet and the U.S. fleet for 1986 and 1987 by early September of this year. A comparison of the mortality rates for 1988 will not be available until September, 1989.

(b) The NMFS did not require the submission of mortality data for individual nations exporting yellowfin tuna to the U.S. in 1984 and it would be difficult to obtain because few non-U.S. tuna purse seine vessels carried observers that year. An estimate of total mortality for all non-U.S. nations tuna purse seine fishing on porpoise in the eastern Pacific in 1984 is 15,018. The preliminary mortality estimate for the non-U.S. fleet in 1987 is 101,036 porpoise. Data sufficient to estimate mortality on a nation-by-nation basis for 1986 and 1987, will be submitted by August 1988 by each nation purse seine fishing in the eastern Pacific that plans to import tuna into the U.S. It would be difficult at this time to determine the mortality level that would be comparable to the U.S. mortality as the MMPA requires NMFS to make a rate comparison and not establish or calculate a nation-by-nation or overall mortality level. To be determined to be comparable, nations with large fleets (e.g., Mexico and Venezuela) must achieve a mortality rate no more than 25% greater than the U.S. rate by the 1990 fishing year. Nations with small tuna fleets must be no more than 75% greater than the U.S. rate by 1990. Because the U.S. rate fluctuates greatly from year to year, it is difficult to project future mortality levels. Because our methodology for calculating mortality comparability is quite detailed, a copy of our March 1988 interim final rulemaking on this subject is attached.

(c) The embargo against Mexico was imposed in 1980 under the Magnuson Act following the seizure of a U.S. tuna vessel. A similar prohibition was imposed under the MMPA shortly thereafter when Mexico failed to submit documentation required under that Act. The MMPA embargo was removed in 1986 following a request by the Government of Mexico for a determination that Mexico was tuna purse seine fishing on schools of porpoise in conformance with the MMPA. At that time, the Assistant Administrator determined that Mexico's regulatory program and their participation in the *Inter-American Tropical Tuna Commission's (IATTC)* porpoise observer program was sufficient to be found in substantial conformance with the MMPA. The Assistant Administrator also noted that the finding would remain in effect only until the new tuna importation regulations became effective, which was expected to take place within the next 60 days. The new regulations (which were published in March 1988) were to implement the 1984 amendments to the MMPA and require nations to achieve comparability with the U.S. kill rate.

Question 2:

The 1981 amendments to the MMPA require NOAA to undertake a program of research into new methods of locating and catching tuna without the incidental taking of marine mammals. Testimony submitted for the record of the hearing by Greenpeace noted that despite this clear mandate, "the ensuing years have been devoid of research and development of alternative fishing methods". Is that an accurate characterization?

ANSWER: Between 1980 and 1983, the fishing industry, Hubbs Research Institute, and the NMFS investigated the feasibility of using hydrophones to locate tuna schools not associated with porpoise. The technique did not appear feasible and no further investigation was pursued.

In 1986, the NMFS convened a group of experts to consider alternatives to purse seining on porpoise. The participants considered three general areas of investigation: 1) modification of existing gear, 2) separating tuna from dolphin prior to setting purse seines, and 3) innovative technology.

The consensus of the group was that too little was known about the dynamics of the tuna/dolphin bond to expect that methods could be developed to separate the tuna from the dolphins prior to setting a net. The NMFS is continuing to collect data through its observer program that will aid in our understanding of this relationship.

Three innovative technologies were discussed as alternative approaches to purse seining: 1) fish aggregating devices (FADs), 2) longline fishing, and 3) use of sonar to locate tuna not associated with dolphins. The potential use of FAD's remains under review. Other alternatives were considered unacceptable because they created an economic disadvantage for the U.S. fleet and they were either a less efficient method or were too costly. The working group concluded there would be little benefit in pursuing these alternatives and that the most productive area of investigation would be to continue modifying existing gear and methods. Gear modifications have contributed to the reduction in porpoise mortality to current levels. The group concluded that use of lights to illuminate the backdown channel in sundown sets was reducing mortality, and this requirement was added to our domestic regulations in July 1986. Additional modifications to the webbing below the porpoise safety panel were identified as a possible area for investigation. NOAA will continue to investigate new methods and gear technology improvements as they are identified.

Question 3:

Greenpeace notes in its testimony that it has heard that recent estimates made by the NMFS place the current population of northern offshore spotted dolphins at 900,000 to 1 million animals, and that the maximum replacement yield of this stock would optimistically be at 40,000 animals.

a. Are these figures accurate?

b. How many of these animals can legally be taken by the U.S. and foreign fleets combined, pursuant to the statutory quota and the interim regulations issued on March 18, 1988?

c. How well would the quota serve to protect this stock, if both the U.S. and the foreign fleets took their allowable limits?

ANSWER: (a) The estimate of 900,000 to 1 million northern offshore spotted dolphins is correct for the 1986 estimate of relative abundance reported from the results of the first years research cruise; preliminary indications from the 1987 cruise suggest that the relative abundance estimate is higher than the previous year's estimate. The basis of the estimate cited by Greenpeace indicating a maximum replacement yield of 40,000 animals is presumed to be derived from an annual replacement yield of 4 percent times the estimated one million northern offshore spotted dolphin. The accuracy of these data will be determined at the completion of NMFS's five year research survey.

(b) The U.S. quota for all species, including the northern offshore spotted dolphin, is 20,500 animals. Individual stock quotas are based on 50% of the 1979 estimated maximum replacement yield of that stock. This approach allows U.S. fishermen flexibility to tailor their fishing strategies to variations in the availability and location of yellowfin tuna without surrendering unfair advantage to the foreign fleet which is not subject to strict stock quotas. Because 50% of the replacement yield for northern offshore spotted dolphin was calculated in 1981 to be 42,898 and because that number is significantly greater than the overall quota of 20,500, that latter number also became the individual stock quota for northern offshore spotted dolphin.

There is no foreign quota in the interim regulations since the 1984 amendment requires a kill rate comparability standard to be used to control the level of foreign dolphin mortality. (See response to question 1.b. above). Estimates for non-U.S. mortality and mortality rates for 1986 and 1987 will be available in mid- to late-August.

(c) While there is no combined allowable limit (either overall or by porpoise stock) for U.S. and non-U.S. tuna fleets, the U.S. quota in combination with a comparable mortality rate for non-U.S. fleets, should serve to protect both the northern offshore spotted stock and the other stocks until NOAA completes its five-year trends and abundance assessment. As long as the combine U.S. and non-U.S. mortality level of the northern offshore spotted stock (or any other stock), does not exceed its annual replacement yield (calculated in 1979 to be 85,796), the population with either remain at its present level or increase in size. The U.S. has not exceeded its 20,500 quota for northern offshore spotted dolphin since it was established in 1980 (the highest mortality was in 1986, 13,721). IATTC estimates for the mortality for the International Fleet (including the U.S.) for 1986 is 65,117. This is for both northern and southern offshore spotted dolphin. The 1987 estimates should be available in August.

Question 4:

The fishing industry and the environmentalists submitted to the Committee their proposal for amendments to the MMPA, which called for the placement of 35 observers on U.S. vessels in the west coast fisheries. At the hearing, Lee Alverson, representing the fishing industry, estimated that the placement of the observers would cost between $2 million and $2.5 million. What is your estimate of the cost of the observer coverage called for in the proposal?

ANSWER: The fishing industry's estimate of $2.5 million is reasonable for their estimated placement of 35 observers. However, NOAA believes that the lists of species and fisheries covered by the proposal need to be expanded. The cost of an observer program will depend on the number of observers required to cover all appropriate fisheries. We are developing an expanded list of species and fisheries which might be covered, including certain East Coast fisheries. Once this list is compiled, we will have a better estimate of what an observer program will cost.

32.503-6 and/or recommending nonaward of potential contracts.

(8) *Notice of disapproval.* (i) If, within 45 days after receipt of the notice of deficiency (see paragraph (b) (4) of this section) or a reasonable extension thereto, the contractor has neither submitted an acceptable corrective action plan nor corrected significant deficiencies, all or a selected portion(s) of the contractor's estimating system shall be disapproved in writing. The notice of disapproval shall identify the cost element(s) covered by the disapproval and list the deficiencies which prompted the disapproval for each affected cost element.

(ii) A copy of the Notice of Disapproval shall be sent to the cognizant auditor and to each contracting office and contract administration office having substantial business with the contractor.

(9) *Withdrawal of estimating system dissapproval.* After the ACO determines that the contractor has corrected the significant system deficiencies, the ACO shall notify the contractor, the auditor, and all affected contracting activities that the disapproval has been withdrawn.

215.811-79 Contract clause.

The contracting officer shall insert the clause at 252.215-7003 in all solicitations and contracts to be awarded on the basis of certified cost or pricing data.

PART 242—CONTRACT ADMINISTRATION

3. Section 242.302 is amended by adding paragraph (S-75) to read as follows:

242.302 Contract administration functions.

* * * * *

(S-75) Review contracting estimating systems.

PART 252—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

4. Section 252.215-7003 is added to read as follows:

252.215-7003 Cost estimating system requirements.

As prescribed in 215.811-79, insert the following clause.

Cost Estimating System Requirements (May 1988)

(a) *Definition.* "Estimating System" is a term used to describe a contractor's policies, procedures and practices for generating cost estimates which forecast costs based on information that is available at the time. It includes the organizational structure; established lines of authortiy, duties, and responsibilities; internal controls and managerial reviews; flow of work, coordination, and communication; and estimating methods, techniques, accumulation of historical costs, and analyses used by a contractor to generate estimates of costs and other data included in proposals submitted in the expectation of receiving contract awards.

(b) *General.* The Contractor shall have an estimating system that consistently produces well supported proposals that are an acceptable basis for negotiation of fair and reasonable prices. The estimating system should be consistent with and integrated with the Contractor's related management systems and subject to applicable financial control systems.

(c) *Applicability.* Paragraphs (d) and (e) are also applicable if the Contractor is a large business and, in its fiscal year preceding award of this contract, received Department of Defense (DoD) prime contractors or subcontracts thereunder totaling fifty million dollars ($50 million) or more for which certified cost or pricing data were required. This clause is also applicable if the Contractor is a large business which, in its fiscal year preceding award of this contract, received Department of Defense (DoD) prime contracts or subcontracts thereunder totaling ten million dollars ($10 million) or more for which certified cost or pricing data were required, and during performance of this contract the Contracting Officer notifies the Contractor in writing that paragraphs (d) and (e) of this clause apply.

(d) *System requirements.* The Contractor shall establish and maintain an estimating system in compliance with subsection 215.811-74 of the DoD FAR Supplement.

(1) The Contractor shall disclose its estimating system to the Contracting Officer responsible for contract administration (ACO) in writing. If the Contractor wishes the Government to protect such information as privileged or confidential, an appropriate legend should be placed on the face of the document(s) at the time of submission. An estimating system disclosure is adequate when the Contractor has provided the ACO with documentation which (i) accurately describes those policies, procedures and practices that the Contractor currently uses in preparing cost proposals; and (ii) provides sufficient detail for the Government to reasonably make an informed judgment regarding the adequacy of the Contractor's estimating practices.

(2) Significant changes to the cost estimating system must be disclosed to the ACO on a timely basis.

(3) The Contractor shall comply with its disclosed estimating system.

(e) *Estimating system deficiencies.* (1) If during the period of performance of this contract, the Contractor receives a report of the review of its estimating system which identifies deficiencies in the system, the Contractor agrees to respond as follows:

(i) If the Contractor agrees with the report findings and recommendations, the Contractor shall, within thirty (30) days of receipt of such report, indicates its agreement in writing; and within (60) days of receipt of such report, correct any identified deficiencies or submit a corrective action plan showing proposed milestones and actions leading to elimination of the deficiencies.

(ii) If the Contractor disagrees with the report findings and recommendations, the Contractor shall respond in writing within thirty (30) days of receipt of the report, indicating its rationale for each area of disagreement.

(2) The ACO shall evaluate the Contractor's response to the report and notify the Contractor of his/her determination concerning any remaining deficiencies and/or the adequacy of any proposed or completed corrective action(s).

(End of clause)

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 216

[Docket No. 60224-7282]

Regulations Governing the Importation of Tuna Taken in Association With Marine Mammals

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce.

ACTION: Interim final rule with request for comments.

SUMMARY: NMFS issues this interim final rule in response to a 1984 amendment to the Marine Mammal Protection Act (MMPA). The rule amends marine mammal regulations regarding the importation of yellowfin tuna caught with purse seines in the eastern tropical Pacific Ocean (ETP).

Under this rule, any nation wishing to export yellowfin tuna to the United States that has purse seine vessels in the ETP must satisfy a two-part test that requires: (1) Documentary evidence that the nation has adopted a regulatory program governing the incidental taking of marine mammals in the fishery that is comparable to the program of the United States, and (2) documentation that the average rate of incidental mortality of marine mammals in the fishery by its vessels is comparable to the rate of incidental mortality of marine mammals from fishing by the U.S. fleet.

DATE: This rule is effective April 18, 1988. Comments on the rule must be submitted no later than May 17, 1988.

ADDRESS: Comments should be addressed to the Assistant Administrator for Fisheries, National

Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce, Washington, DC 20235. An Environmental Assessment/Regulatory Impact Review is available upon request.

FOR FURTHER INFORMATION CONTACT: E.C. Fullerton (Director, Southwest Region, NMFS), 213 514–6196; or Nancy Foster (Director, Office of Protected Resources and Habitat Programs, NMFS), 202–673–5355.

SUPPLEMENTARY INFORMATION:

Background

NMFS issued a proposed rule on August 13, 1986 (51 FR 28963), to amend 50 CFR 216.24 to modify the importation requirements for yellowfin tuna caught in association with marine mammals in foreign purse seine vessels in the ETP. As a result of comments received on the proposed rule, modifications and clarifications have been made to the rule.

Accordingly, the rule is being published as an interim final rule with a 60-day comment period. The regulatory procedures adopted in this rule are based on the best information available to NMFS at this time and represent a prudent approach to saving marine mammals. However, NMFS does not want the regulatory procedures adopted here to frustrate the purpose of the 1984 amendment and this regulation, that of saving marine mammals. In particular, NMFS wants to encourage foreign nations to comply with these regulations by implementing comparable programs and working to reduce their kill rates, rather than cause them to seek tuna markets outside the United States, thus frustrating U.S. efforts to reduce the total marine mammal kill by all nations. Furthermore, NMFS recognizes that changing conditions in the tuna industry, and the development of new and effective basic equipment and techniques for saving marine mammals, may necessitate re-evaluation of these regulations in the future. Therefore, NMFS invites comments from other Federal agencies, the public and foreign governments on this interim final rule. In particular, NMFS invites comments on the criteria set forth in this notice for determining comparability of regulatory program and kill rate, and their possible effects on the development of improved techniques and equipment.

Regulations governing the taking of marine mammals incidental to commercial fishing operations appear at 50 CFR Part 216. Included in these regulations are provisions concerning the importation of yellowfin tuna and tuna products from nations whose vessels participate in the yellowfin tuna purse seine fishery in the ETP. Effective January 1, 1978, these importation provisions made the importation of yellowfin tuna and tuna products from nations known to be involved in the ETP fishery contingent upon certain findings by the Assistant Administrator for Fisheries, NOAA (Assistant Administrator). Under § 216.24(e)(5)(i), the Assistant Administrator must find (a) that the fishing operations of the nation concerned * * * are conducted in conformance with U.S. regulations and standards * * *" or (b) that * * * "although not in conformance with these regulations, such fishing is accomplished in a manner which does not result in an incidental mortality and serious injury in excess of that which results from U.S. fishing operations under these regulations." These findings are subject to an annual review in which the information items listed in 50 CFR 216.24 (e)(5)(ii) are updated for the previous calendar year.

Since 1978, 18 nations in addition to the United States have purse seined in the ETP. Currently, findings are in effect for the following countries: the Cayman Islands, Costa Rica, Ecuador, Mexico, Panama, Spain, Vanuatu, and Venezuela. The Congo, El Salvador, Mexico, Peru, Senegal, and the Union of Soviet Socialist Republics (U.S.S.R.) have been prohibited from exporting yellowfin tuna to the United States during some period of time under these regulations. The Congo, Peru, and Senegal subsequently removed their fleets from the ETP. El Salvador and the U.S.S.R. do not have findings and therefore cannot export yellowfin tuna to the United States. Bermuda, Canada, the Republic of Korea, Nicaragua, and New Zealand have not purse seined in the ETP in recent years. Additional information can be found at 51 FR 18644, May 21 1986; 50 FR 3950, January 29, 1985; 48 FR 56986, December 27, 1983; 48 FR 30422, July 1, 1983; 48 FR 14431, April 4, 1983; 47 FR 11307, March 16, 1982; and, 46 FR 10974, February 5, 1981.

The most recent information available indicates that the active purse seine fleets with vessels of over 400 tons carrying capacity for nations currently with findings are as follows:

Nation	Number of vessels [1]
Cayman Islands	1
Costa Rica	1
Ecuador	4
Mexico	43
Panama	1
Spain	2
Vanuatu	4
Venezuela	15

[1] As of December 31, 1986.

Non-U.S. fleets have substantially increased their fishing for yellowfin tuna associated with marine mammals in the ETP since 1984. The Inter-American Tropical Tuna Commission (IATTC) estimated that non-U.S. vessels harvested 398,000 short tons (st) of yellowfin tuna on marine mammals during 1979–86, an average of about 49,750 st per year. The non-U.S. fleets are estimated to have taken 45,700 st of yellowfin tuna in marine mammal sets in 1984 and 109,600 st in 1985. Preliminary 1986 estimates indicate that the total yellowfin tuna catch by all vessels (including U.S. vessels) in the IATTC Yellowfin Tuna Regulatory Area (CYRA) was about 253,200 st, which is up from 142,300 st in 1984 and 217,000 st in 1985. The highest catch year on record for these species in the CYRA was 1986. The estimated total fleet capacity in 1986 was 122,900 st, which was a slight reduction from 129,500 st in 1985.

Nations with findings accounted for 194,882 st or 66 percent of all yellowfin tuna caught in the ETP during 1986. Mexico caught 59 percent of this amount, or 114,070 st. Other major nations catching ETP yellowfin tuna included Venezuela and Ecuador. Of the total amount of yellowfin tuna caught in the ETP by nations with findings during 1986, 24 percent, or 46,722 st, was imported into the United States fresh or frozen for use by domestic canneries. The estimated value of this product was approximately $37 million. Imports from Venezuela comprised the largest share of ETP yellowfin tuna, representing 35 percent of the total amount. Other major suppliers included Ecuador (19 percent) and Mexico (7 percent). Other nations with findings collectively accounted for 39 percent of the total ETP yellowfin tuna imported by U.S. canneries. Much of this amount was transshipped from Panama to U.S. canners in Puerto Rico.

With the exception of Mexico, nations with findings were very dependent upon the United States in 1986 as a market source for ETP-caught yellowfin tuna. Fifty-three percent of the yellowfin tuna caught in the ETP by Venezuelan vessels was imported into the United States by domestic canners in 1986. The value of this product was approximately $14 million. Twenty-six percent of all Ecuadorian-caught ETP yellowfin tuna was imported by U.S canneries. Only 3 percent of the Mexican-caught ETP yellowfin tuna was imported by the United States during 1986 due to Mexico's strong European market for yellowfin tuna. Sixty-three percent of the ETP yellowfin tuna caught by all other countries was imported by U.S. canneries during 1986. These countries include the Cayman Islands, Panama, Spain and Vanuatu.

Canned tuna from ETP fishing nations amounted to 11,517 st, only 4 percent of all canned tuna imported into the United States. The amount of yellowfin tuna actually caught in the ETP, canned by nations with findings, and later imported into the United States is estimated to be very small but cannot be traced due to the present U.S. Customs importation classification system.

Public Law 98–364

On July 17, 1984, the President signed into law an act (Pub. L. 98–364) reauthorizing and amending the MMPA. One amendment is to ensure that each nation exporting yellowfin tuna to the United States has in place a regulatory program for the protection of marine mammals that is comparable to the program of the United States. It further requires documentation that the average rate of incidental taking of marine mammals by vessels of the harvesting nation in the ETP tuna fishery is comparable to that of the United States.

The House Committee on Merchant Marine and Fisheries noted that the regulatory program of the United States is quite extensive and detailed (see H.R. Report 98–758, p. 8). The Committee in reporting this legislation stated that it does not intend to require that the regulatory program of foreign countries be identical to that of the United States. Programs that require the basic equipment and techniques used to protect marine mammals and have as their purpose the minimization of the number of animals incidentally taken would be comparable as long as they provided a level of protection substantially equivalent to that of the U.S. program. Similarly, the Committee recognized that the average rate of incidental taking will vary from year to year. The Committee stated that it did not intend for the importation of tuna products to be banned from a nation if the rate of incidental taking is slightly higher in any given year. However, it added that the report of levels or rates of incidental mortality being consistently higher than those of the United States or significantly higher in any given year should result in the prohibition of imports.

Several important points must be made in this context. First, the statute clearly requires the Secretary of Commerce to evaluate performance on a country-by-country basis. Second, the Congress indicated that NMPS should continue to encourage nations which have not already done so to implement observer programs either on their own or in cooperation with the IATTC. Third, the Congress intended that NMFS require estimates of incidental take that are equivalent in accuracy and reliability to observer data obtained in the U.S. and IATTC observer programs. In summary, the Congress expects that the importation regulations will result in demonstrable evidence that those nations which have purse seine fishing vessels in the ETP and want to export yellowfin tuna to the United States have effective programs to prevent or reduce marine mammal mortality.

Comments and Responses

A proposed rule was published on August 13, 1986 (51 FR 28963), for public review and comment. NMFS received seven letters of comment on the proposed rule. Three letters were from or on behalf of national or local environmental organizations, two were from U.S. Government entities and two were from the tuna industry. A summary of the comments received and the NMFS response to those comments are as follows:

1. *Comment:* Several commenters expressed concern that the proposed regulations will not lessen high incidental mortality rates by foreign vessels. The commenters strongly recommended that a nation should have gear and procedure requirements comparable to U.S. industry or prove the effectiveness of the system in use.

Response: NMFS concurs. The Guidelines for Comparable Regulatory Programs and Mortality Rates have been amended to describe what NMFS considers as minimum gear and procedural requirements to be accepted as comparable to the U.S. industry.

2. *Comment:* Several commenters suggested that the consequences of not having a comparable observer program should be more clearly defined.

Response: NMFS agrees and has modified the Guidelines for Comparable Regulatory Programs and Mortality Rates to require participation in an approved observer program and to identify an annual observer coverage goal of 33 percent for individual harvesting nations. The consequence for a nation not meeting this goal could be a negative finding by the Assistant Administrator if it is determined that the data submitted are not sufficient to make a finding of conformance.

3. *Comment:* Several commenters suggested that area fished and stock composition be considered in comparing the average rate of incidental marine mammal mortality between U.S. and foreign fleets.

Response: NMFS acknowledges that incidental marine mammal mortality varies by stock and geographic area. Based on recent summarized data available from IATTC, three distinct geographic areas have been established in the regulations for comparing U.S. and foreign marine mammal mortality rates. The distribution and behavior of the common dolphin were found to be sufficiently different from other marine mammal stocks that mortality data also will be requested separately for comparability purposes.

4. *Comment:* Four commenters suggested that the 50 percent criterion for comparing incidental mortalities between U.S. and foreign fleets be reviewed, because it appeared to be too high.

Response: NMFS has made substantial modifications to the criterion for determining comparability rates of incidental mortality of marine mammals. These modifications are designed to demonstrate firmness in U.S. efforts to achieve comparability between U.S. and foreign fleets in reducing marine mammal mortality without precluding foreign cooperation in saving marine mammals by issuing criteria so stringent that nations will seek tuna markets outside the United States, thus circumventing U.S. efforts to reduce the total marine mammal mortality by all nations.

The revised criterion for determining comparability establishes the average number of marine mammals killed per ton of tuna caught in sets made on marine mammals over a five-year period or for the most recent year, whichever is lower, as the measure of performance for U.S. and foreign fleets. Comparability will be evaluated annually by geographic area, separating data on common dolphin sets from all other marine mammal species. Details of the system are provided later in this preamble.

5. *Comments:* One commenter recommended that the reference to "incidental mortality" be amended to "incidental take."

NMFS has chosen to use the rate of kill as the standard for the rate comparison test, and not to use other types of "takings" like chase, encirclement, or capture. This decision is supported by the fact that virtually the entire focus of the domestic regulatory program in practice is "kill", and the yearly quota used for monitoring and controlling the fishery established first by regulation and now by statute is in terms of "kill". Although studies are underway on the effects of chase, encirclement, and capture, the application of these "takings" to the rate comparison test is premature. When or if restrictions on these types of "takings" are sufficiently supported by scientific evidence to be meaningfully incorporated into the domestic regulatory program then their use in the comparison test would be appropriate.

6. *Comment:* One commenter questioned our preference for "kill-per-ton" over "kill-per-set" for making mortality rate comparability determinations.

Response: Although the proposed rule would have used both "kill-per-ton" and "kill-per-set" rates, NMFS has concluded that the use of marine mammals killed per ton of yellowfin tuna is the best single rate to use in the comparability test implemented in these regulations. Because species groups and area of catch are factored into the comparison test along with the kill rate, NMFS has determined that the complications of using both kill-per-set and kill-per-ton in addition to these other factors is not warranted. Although kill-per-set is useful for some purposes, NMFS has concluded that kill-per-ton is a better rate for comparison test purposes because it takes into consideration the performance of vessels for any given amount of yellowfin tuna caught. This rate best focuses foreign countries on the desirable result of minimizing marine mammal kill for any given amount of catch of yellowfin tuna.

7. *Comment:* Two commenters expressed concern that the regulations would encourage nations to market their tuna products outside the United States because of difficulties in obtaining detailed tuna/marine mammal data from foreign nations and, in some instances, enacting acceptable statutes to meet U.S. requirements.

Response: The statute requires that this regulatory system be established. NMFS has selected only the most relevant data requirements which are known to be available and necessary to make a finding.

NMFS recognizes the difficulties encountered by certain nations in enacting acceptable statutes to meet the finding requirement when the vessels operating under their flags are under charter to another nation whose vessels operate under statutes already approved by the United States. To accommodate these rare situations, provision has been made to consider foreign vessels chartered in another country to be operating under the laws of that nation. A definition for certified charter vessel has been added in the regulation for this purpose.

8. *Comment:* Several commenters questioned why alternative programs could not be used as a management tool. Multi-regional cooperative programs and foreign quotas on incidental take were specific suggestions as alternatives to the proposed regulation.

Response: The 1984 amendments to the statute mandate that each nation is to be examined separately for comparability with the U.S. performance and programs.

Interim Final Rule

This interim final rule implements a performance-based import certification program consistent in basic structure and in principle with the marine mammal protection program for U.S. vessels which take marine mammals incidental to yellowfin tuna while purse seine fishing. This certification program is a new approach, the elements of which may be modified by NMFS as new information becomes available and experience demonstrates better ways to achieve lower mortality.

A two-part test will be used each year to determine whether to grant or extend a finding of conformance for any individual nation. This test applies to any nation that has a vessel or a certified charter vessel of 400 tons carrying capacity or greater that fishes for tuna in the ETP. This is consistent with U.S. regulations and recognizes that smaller vessels cannot effectively set on marine mammals. First, each nation must be found to have a regulatory program to protect marine mammals that is comparable to the U.S. program. The annual evaluation of the regulatory program will consider the comparability of laws, regulations, and guidelines which govern the gear and techniques which each nation's vessels must use to prevent or minimize marine mammal mortality when purse seining for yellowfin tuna associated with marine mammals. Second, the effectiveness of each nation's regulatory program will be assessed by monitoring the nation's annual marine mammal kill rate. Each nation must demonstrate, using reliable and verifiable data, that the average annual rate of incidental mortality of marine mammals per ton of yellowfin tuna taken with marine mammals from fishing vessels operating under its laws is comparable to the incidental rate of marine mammal mortality achieved by U.S. vessels fishing in the same geographic area and in association with the same species groups. For purposes of this test, the two species groups considered are common dolphins and all other marine mammal species. The Comparable Regulatory Program test will be applied immediately and the kill rate test will be applied in 1991 when adequate data are available to allow a meaningful comparison to be made, as explained below.

Initial Certification

An existing finding of conformance will continue in effect until a determination (either positive or negative) is made on a new request for a finding under these new regulations, if the request and documentation are submitted within 120 days from the effective date of these regulations and if the application as submitted is complete. Findings for nations not submitting the required documentation will expire 180 days after the effective date of these regulations. Any nation that does not have an existing finding of conformance but has one or more vessels of 400 tons carrying capacity or greater using purse seine gear in the ETP that desires to export yellowfin tuna or yellowfin tuna products to the United States must submit documentation to support a finding at least 120 days prior to the date it wishes to commence exportation of yellowfin tuna.

The Assistant Administrator will review each nation's submission for completeness and will assess each nation's described regulatory program for comparability with the U.S. program. Additional information may be requested from the nation before issuing an affirmative finding. An affirmative finding for this test is likely to be issued if the program contains provisions similar to those in the guidelines that follow. Copies of the relevant U.S. regulations have been provided to all interested nations. Each nation's submission must contain sufficient detail so that the Assistant Administrator will be able to determine that the nation's regulatory program is comparable in substance and effectiveness to the U.S. program. At a minimum, the documentation for an initial finding must contain:

1. A description of gear and procedural requirements, including copies of relevant laws, guidelines, and implementing regulations, and the enforcement program designed to reduce or prevent the incidental mortality and injury of marine mammals in purse seine fishing by its vessels;

2. A description of the observer program by which the incidental mortality of marine mammals is monitored and by which annual species mortality and fleet mortality rates are estimated. If the nation is not participating in the IATTC observer program but is conducting an independent observer program, the nation must provide details regarding the number and percentage of trips covered, training requirements for observers, the data collected by observers, and the agency to contact for additional information;

3. A description of the methods used to identify problems and solutions to improve the performance of individual fishermen in reducing incidental mortality and how fishermen will be advised (e.g., through technical experts or a peer advisory group);

4. A list of the purse seine vessels of 400 short tons carrying capacity or greater (i.e. IATTC Category 6 vessels) in the nation's fleet which operated in the ETP in 1986 or 1987, or both; the status of each vessel during 1986 and 1987 (e.g., actively fishing in the ETP, actively fishing in other waters, or inactive); and the expected status during 1988 of the above vessel(s) and all other purse seine vessels expected to operate in the ETP in 1988.

5. Data on the performance of the nation's purse seine vessels (including certified charter vessels) operating in the ETP for either or both of the previous two fishing years (1986–1987) including:

a. Total number of tons of yellowfin tuna observed caught in each fishing area by purse seine sets on:

1. Common dolphin and

2. All other marine mammal species;

b. Total number of marine mammals observed killed in each area by purse seine sets on:

1. Common dolphin and

2. All other marine mammal species;

c. Number of observed trips and number of observed purse seine sets on marine mammals by the nation's purse seine fleet during the year;

d. Total number of vessel trips and total number of purse seine sets on marine mammals by the nation's purse seine fleet during the year; and

e. The number of observed purse seine sets in which more than 15 marine mammals were killed.

The information requested in 5 a–c, and 5e refers to information obtained by observers on the tuna vessels. For purposes of the information requested above, a purse seine set on common dolphins is one in which more than 50 percent of the marine mammals captured are common dolphins.

These data must be provided by geographic area and for two species groups, common dolphin and all other marine mammals. A mortality of 15 animals or more in a set is used to identify problem sets that require special attention by the nation to analyze skipper performance or the effectiveness of fishing techniques to avoid future mortalities from similar causes.

Guidelines for Comparable Regulatory Programs and Mortality Rates

Documentation submitted annually by a nation must show that certain minimum requirements have been met in order to satisfy the two-part test for comparability.

Comparable Regulatory Program Test

1. Marine mammal rescue gear, equipment and procedural requirements and guidelines.

At a minimum, the gear and procedural requirements must include the installation and use of a superapron or fine mesh system in the purse seine net, a backdown procedure, the availability of speedboats with towing bridles to hold open nets, the availability of a raft to aid live animals after backdown, a prohibition on brailing and sacking up live animals from the net and the installation and use during darkness of a lighting system capable of illuminating the backdown channel with at least 140,000 lumens. Sets on pure schools of eastern spinner dolphin and on pure schools of any other species of marine mammals except offshore spotted dolphin stocks, striped dolphin species, and common dolphin species must be prohibited.

2. An observer program to monitor the effectiveness of marine mammal rescue gear and procedures and to record the incidental mortality and serious injury of marine mammals associated with fishing.

To be comparable with the U.S. observer program, a nation must participate in an observer program with a goal of 33 percent observer coverage on trips involving fishing on tuna associated with marine mammals. This could be achieved by an individual nation placing a qualified technical observer aboard its vessels on every third trip or on a regional basis by nations participating in the IATTC observer program. If a program's observer coverage falls below 33 percent, the nation must explain the cause of the problem and how it will be rectified in the future. Observer coverage consistently below 33 percent or drastically below 33 percent in any one year would be a basis for finding that the program is not comparable to that of the United States.

3. An advisory group to identify problems and solutions to improve the performance of individual fishermen in reducing incidental marine mammal mortality.

A panel of expert captains is a peer advisory group established by the U.S. industry to review and improve individual skipper performance. A similar peer advisory group established by an individual nation or on a regional basis would be considered comparable, as would an advisory group of technical experts.

Comparable Mortality Rate Test

The ultimate goal for comparability is to attain foreign marine mammal mortality rates (kill-per-ton) at least as low as those of the United States. However, after reviewing the limited kill-rate summary data for the aggregate foreign tuna fleet, it was found that the current kill rate may be up to four times higher than the U.S. rate. Based on this starting rate, it was determined that, as an interim step, kill rate comparisons should not be used as a basis for a negative finding until 1991. This allows nations time to gather adequate data to allow the United States to make a meaningful comparison, and to work with their skippers to reduce their kill rates.

NMFS will monitor the annual kill-per-ton rate through 1990 by species and fishing area. During this period, nations will be expected to maintain a negative trend in their kill-per-ton rates to assure that effective regulatory programs are being conducted and that rates comparable with the United States will be attained at the end of the interim period. A negative trend will be assessed by fitting a statistical regression line to the annual kill-per-ton rates for the years 1986–90, and determining the slope of the line. If the U.S. kill-per-ton rate increases during this period, however, the kill-per-ton rate for foreign nations can increase in proportion to the U.S. rate.

However, beginning with the 1988 data, if the annual kill-per-ton rate for any nation does not decline, or increases more than the U.S. rate increases, the Assistant Administrator will issue a negative finding unless, after a review of the nation's explanation of the causes and actions taken, the Assistant Administrator determines that actions taken or being taken are likely to reduce marine mammal mortality in the future. In conducting the review, the Assistant Administrator will request specific details concerning the actions taken to identify and counsel any skippers whose performance is unsatisfactory and to handle any other specific factors causing high mortality.

NMFS decided that this phase-in period was appropriate because it would encourage foreign nations to comply with these regulations by implementing comparable programs and working to reduce their kill rates, rather than cause them to seek tuna markets outside the United States, thus frustrating U.S. efforts to reduce total marine mammal kill by all nations.

The rates of marine mammal mortality (kill-per-ton) estimated from extensive observer data have varied significantly for the U.S. fleet since 1979 in each fishing area. We assume that the foreign kill rate will also vary significantly from year to year. To reduce this variability, NMFS will use a five year running average for kill rate comparison if adequate data for the five year period exists. This will provide a larger data base for use in the analysis. Most nations with current findings were participating in an adequate observer program by 1986. Therefore, during the interim period of 1986 through 1990, most countries could gather 5 years of data. If a country does not have five years of adequate data by 1990 or when they apply for a certification after 1990, NMFS will use the information from those years for which the country has adequate data. If a nation's kill rate for the most recent year is lower than the multi-year average, the nation can use that for comparison. This, however, should not be interpreted as allowing a nation to have high mortality rates for four years, and then by meeting the comparability test in the last year, that importation will necessarily be allowed. It should be remembered that nations must also achieve a negative trend in its kill rate during the first five year period, absent an explanation acceptable to NMFS.

There are significant differences in mortality rates in three different areas of the ETP. These areas are the major inshore area (Area 1) and offshore area (Area 2) fished by all nations, and all other areas fished (Area 3). Also, the marine mammal kill rate in sets on common dolphin is significantly greater than the kill rate from sets on all other species. NMFS has decided that these differences should be accounted for in applying the kill rate test. This would result in a fairer and more accurate comparison than a simple comparison of rates without considering the effect of area and species differences upon mortality. Therefore, before comparing a foreign kill rate with the U.S. kill rate, NMFS will weight the U.S. kill rate according to the amount of tuna that the foreign nation caught in the three different areas and on the two different species groups, as shown in the example below.

The United States will have more confidence in an estimate of a nation's kill rate if that nation has observer data from at least 5 trips and 100 sets per year. Conversely, we will have less confidence in data derived from less than 5 trips and 100 sets. Because of the uncertainty of estimates of kill and the small numbers of porpoise involved in the fisheries of nations with small fleets, we will use a less stringent test for these nations. If a nation's kill rate is derived from data from at least 5 trips and 100 sets per year, that nation's kill rate may be no more than 25 percent higher than the comparable U.S. kill rate to receive a positive finding for the kill rate test. If the kill rate is derived from data from fewer than 5 trips and 100 sets per year, the nation must have a kill rate that is no more than 75 percent greater than the comparable U.S. kill rate to receive a positive finding on the kill rate test.

Summary and Example: The comparable mortality rate test consists of comparing a nation's average mortality rate to the average mortality rate of the United States which is weighted to account for dissimilar amounts of fishing activity between the United States and the foreign nation in three discrete fishing areas and for two groupings of species. The foreign rate is then adjusted by an allowable 25 percent or 75 percent depending upon the number of trips and sets in a year. The foreign nation's average mortality rate using the most recent year of data, or the average of all of the data available from the last five years, whichever is lower, will be used to compare with the same time period of the U.S. data.

Formulas Used To Calculate Foreign and U.S. Mortality Rates

The mortality rate (dolphins killed/ton yellowfin caught) for each foreign nation (R_f) is calculated using data stratified by year, species grouping and area as

$$R_f = \sum_{i=1}^{m}\sum_{j=1}^{2}\sum_{k=1}^{3} M_{ijk} \sum_{i=1}^{m}\sum_{j=1}^{2}\sum_{k=1}^{3} C_{ijk}$$

where M_{ijk} equals the number of dolphins killed during year i, of species group j and in area k and C_{ijk} is the tons of yellowfin tuna caught during year i, on species group j and in area k. Note that m equals 1 if only the most recent year's data are used and equals 5 if the five-year running average is used.

The weighted average mortality rate for the U.S. fleet is calculated by weighting the U.S. rate by the proportion of the total yellowfin tuna caught by the foreign nation that was caught in each year, on each species grouping, and in each area. The U.S. weighted average (R_{us}) is calculated as:

$$R_{US} = (1/C...)\ [\sum_{i=1}^{m}\sum_{j=1}^{2}\sum_{k=1}^{3}(K_{ijk}/T_{ijk})C_{ijk}]]$$

where K_{ijk} equals the number of dolphins killed by the United States fleet during year i, of species grouping j and in area k and T_{ijk} equals the tons of yellowfin caught by the U.S fleet during year i, on species grouping j and in area k. C_{ijk} equals the tons of yellowfin tuna caught by the foreign nation during year i, on species grouping j, and in area k and C • • • is the total catch of the foreign nation for all years, species groupings, and areas combined.

Finally, the U.S. rate (R_{us}) is multiplied by 1.25 if the foreign nation has completed more than 5 observed trips and made more than 100 observed sets or by 1.75 if it has completed less than 5 trips or made less than 100 observed sets. If the foreign nation's rate is less than or equal to the U.S. rate then they have met the mortality rate test standard.

Example: To simplify this hypothetical example, we will assume that nation X has chosen to use only the most recent year (or the only year data was collected). During the year, nation X has completed 6 observed trips and made 250 observed sets on dolphins. Dolphin mortality and yellowfin catch during dolphin sets for nation X and the United States during the most recent year are presented in Table 1.

1. Nation X Rate (hypothetical)

$$R_f = \frac{(1000 + 800 + 0 + 600 + 5000 + 2500)}{(1000 + 500 + 0 + 2000 + 21000 + 6000)}$$

$= 9900/30500$
$= 0.325$

2. United States Rate (hypothetical)

$R_{us} = (1/30500)\ [(200/500)1000 + (600/1800)500 + (100/400)0 + (25/200)2000 + (8000/20000)21000 + (2000/6000)6000]$
$= (400 + 166.667 + 0 + 250 + 8400 + 2000)/30500$
$=$ [illegible]

3. Comparison of Nation X and United States Rates (hypothetical)

Nation X rate = 0.325

$\text{U.S. rate } (R_{us}) \times 1.25 = 0.299 \times 1.25 = 0.374$

Therefore, because Nation X's rate is less than the adjusted U.S. rate, it will be eligible to export yellowfin tuna to the United States.

TABLE 1. NUMBER OF DOLPHINS KILLED AND YELLOWFIN TUNA CAUGHT BY NATION X AND THE UNITED STATES DURING THE MOST RECENT FISHING YEAR, ON COMMON AND ALL OTHER SPECIES, AND IN THREE FISHING AREAS

[Hypothetical example]

Area	Common dolphin sets		All other sets		Total catch
	Mortality (animals)	Catch (tons)	Mortality (animals)	Catch (tons)	
Nation X:					
1	1,000	1,000	600	2,000	
2	800	500	5,000	21,000	
3	0	0	2,500	6,000	
Total		1,500		29,000	30,500
United States:					
1	200	500	25	200	
2	600	1,800	6,000	20,000	
3	100	400	2,000	6,000	

Annual Review

Commencing in July 1989, the Assistant Administrator will annually review all existing findings. The Assistant Administrator will require that each nation submit an annual report by July 31 of each year if it desires an extension of an affirmative finding for the following year. This date was chosen because the annual IATTC information is generally available in early July. This annual report will update the information in the original submission as well as provide data on the performance by its vessels during the previous year. The annual report will include the following:

1. Any changes in the gear, equipment or procedural requirements (including copies of relevant laws, regulations, guidelines, etc.) governing incidental taking of marine mammals by the nation's ETP purse seine vessels;

2. Any changes in the number of vessels, names of vessels or status of vessels on the vessel list submitted previously;

3. Actions (e.g., participation in IATTC workshops) taken by the nation in the past year to reduce or prevent marine mammal mortality and serious injury associated with fishing by its vessels; and,

4. Data on the performance of the nation's purse seine vessels (including certified charter vessels) operating in the ETP for the previous fishing year including:

a. Total number of tons of yellowfin tuna observed caught in each fishing area by purse seine sets on:

1. Common dolphin and

2. All other marine mammal species;

b. Total number of marine mammals observed killed in each area by purse seine sets on:

1. Common dolphin and

2. All other of marine mammal species;

c. Number of observed trips and number of observed purse seine sets on marine mammals by the nation's purse seine fleet during the year;

d. Total number of vessel trips and total number of purse seine sets on marine mammals by the nation's purse seine fleet during the year; and

e. The number of observed purse seine sets in which more than 15 marine mammals were killed.

The annual report must describe in detail the method used to obtain these data. In this context, NMFS recognizes the role filled by IATTC in collecting data on incidental marine mammal mortality through its international observer program and in estimating total mortality associated with U.S. and non-U.S. fishing. The IATTC observer program is comparable to the U.S. observer program and, as now constituted, provides reliable data to estimate total mortality and rates of mortality for vessels from participating nations. These data and resulting estimates represent the best scientific information available for the purposes of these regulations and will be used to monitor mortality in the fishery. Data obtained through participation in the IATTC program and submitted to the Assistant Administrator by the nation requesting certification or by IATTC on behalf of a nation requesting certification will be accepted.

However, a nation is not required to participate in the IATTC program in order to provide acceptable data. A nation may establish its own program or participate in a program like that of IATTC. A nation not participating in the IATTC observer program must provide sufficient information on the observer training and the sampling methodology used in the program in order to demonstrate that any data submitted are of comparable accuracy and reliability. The adequacy of the observer training and observer coverage of such a program will be determined by a scientific review conducted by NMFS in consultation with other scientific experts.

The first annual report will be due July 31, 1989, to cover fishing during the 1988 fishing year.

The Assistant Administrator will review each report carefully to decide whether to extend or terminate a finding under this program. A nation's finding will terminate on December 31 of any year unless the Assistant Administrator receives a complete annual report, determines that the nation's program and kill rates are comparable, and publishes his finding for the following year in the **Federal Register**. Every year the Assistant Administrator will determine whether the nation's program is comparable to that of the United States. In 1989, the Assistant Administrator will also review the kill rate trend as described earlier in the preamble. In 1991, the Assistant Administrator will review the program and the kill rate as described earlier, to determine if both the regulatory program and the kill rate are comparable to those of the United States.

The Assistant Administrator will review the performance of the U.S. fleet by July 1 each year to establish its revised five-year baseline performance level and supporting data that will be used to determine the comparability for each nation for its subsequent year's finding. The revised five-year baseline data will include: the proportion of sets made on marine mammals associated with high mortality sets (more than 15 porpoises killed) and separate computations for the kill-per-ton of common dolphin and for all other marine mammals for each fishing area.

The current five-year average kill-per-ton will be computed using the most recent year's data submitted by the foreign nation which will be added to that nation's four previous years of data to determine whether the new average kill-per-ton rate is within 25 percent or 75 percent, whichever is appropriate, of the weighted U.S. rate for the same years.

In future years, the general procedure will be to receive annual estimates of marine mammal mortality by species and stocks; to receive annual reports with detailed program information and fleet data, to assess these annual reports so that the Assistant Administrator can determine whether each nation's marine mammal regulatory program and kill rate continue to be comparable to the U.S. program and kill rate, and to announce findings at least 60 days before the start of each new calendar year.

Modifications to the Proposed Rule

In addition to those changes to the proposed rule discussed in detail in the preamble above (i.e. 5-year baseline, data gathering period; 25/75 percent mortality rate comparability test; and 3 fishing area—2 species designations) the following modifications to the proposed rule have been made in the interim final rule:

1. Definitions for "certified charter vessel" and "kill-per-ton" have been added to 50 CFR 216.3. The proposed definition for "ETP" has been modified to designate 3 distinct fishing areas.
2. Modifies Tariff Schedule Numbers to reflect changes made by U.S. Customs Service.
3. Does not adopt the proposal to eliminate the Yellowfin Tuna Certificate of Origin (SF 370-1) because it was determined that the necessary documentation was not obtainable elsewhere. The form was however, simplified. The required information items from the form have been added to the rule. The interim final rule eliminates the bill of lading requirement because information is now on the Yellowfin Tuna Certificate of Origin.
4. Places responsibility for monitoring, enforcement and data reporting for certified charter vessels to the nation which charters the vessel(s).
5. Clarifies that mortality rate data must be submitted from vessels with observers. Nations are to submit the observed data, rather than extrapolate from the observed data to an overall kill-per-ton rate.
6. Requires that data submitted for calculating mortality rates must be authentic and accurate.

Confidentiality

All data submitted by foreign nations in compliance with this rule will be kept confidential as allowed by U.S. law. Generally, this means that the data will be made available to the public only in aggregated form.

Classification

The Assistant Administrator has determined that the modifications to the regulations being made at 50 CFR 216.24(e) will not have a significant impact on the human environment. NMFS has prepared an environmental assessment (EA) on the modification. The finding of that EA was that no significant impact on the human environment will occur as a result of this rule and that no environmental impact statement was required. The EA is available upon request (see **ADDRESS**).

The Administrator of NOAA has determined that this rule is not a major rule requiring a regulatory impact analysis under Executive Order 12291. The estimated economic impact of ETP yellowfin tuna import prohibitions, if any, could be expected to result in a short-term, slightly positive benefit to U.S. fishermen and a short-term, slightly negative impact on tuna processors if affirmative findings are not made for nations now exporting ETP yellowfin tuna to U.S. processors. The impact would depend upon the number of nations embargoed and the amount of yellowfin tuna normally provided by the nation(s). This impact would exist until such time as any reduction in imports is made up by exports from other areas of the world, especially from the western Pacific nations which are not affected by this action or by non-embargoed ETP nations. NMFS prepared a regulatory impact review as part of its EA which concluded that this rule will not result in (1) an annual major increase in costs or prices for consumers, individual industries or government agencies; (2) an annual effect on the economy of $100 million or more; or (3) significant adverse effect on competition, employment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. However, if more stringent rules are adopted and/or all ETP fishing nations are unable to qualify to export yellowfin tuna to the United States, it was determined that up to 47,000 st of yellowfin tuna valued at approximately $37 million could be lost to U.S. processors. Such a loss of imported tuna would represent about 24 percent of U.S. production. A copy of the review is available upon request (see **ADDRESS**).

The General Counsel of the Department of Commerce has certified to the Small Business Administration that the proposed modification to the regulations will not have a significant economic impact on a substantial number of small entities. As noted above, more stringent regulations likely would adversely affect the single remaining tuna canning plant in California and the tuna processing facilities in Puerto Rico and American Samoa. These facilities are by definition not small businesses. They would also affect an unknown number of import-export businesses and support industries. The impact on these industries is believed to be insignificant since lightmeat tuna, especially the canned product, is available world-wide and alternate markets are readily available if some ETP sources became unavailable. As a result, a regulatory flexibility analysis was not prepared.

This rule contains collections of information subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). The collections which are subject to the Act are found at 50 CFR 216.24(e) (3) and (4) and have been approved by the Office of Management and Budget under OMB Control Number 0648-0040.

This rule does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 12612.

List of Subjects in 50 CFR Part 216

Administrative practice and procedure, Imports, Marine mammals, Penalties, Reporting and recordkeeping requirements, Transportation.

Date: March 14, 1988.

James E. Douglas, Jr.,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set forth in the preamble, 50 CFR Part 216 is amended as follows:

PART 216—REGULATIONS GOVERNING THE TAKING AND IMPORTING OF MARINE MAMMALS

1. The authority citation for Part 216 continues to read as follows:

Authority: 16 U.S.C. 1361 et seq.

2. Section 216.3 is amended by adding in alphabetical order five new definitions, one for "certified charter vessel," one for "ETP," one for "harvesting nation," one for "purse seine set on common dolphins" and one for "kill-per-ton," to read as follows:

§ 216.3 Definitions.

* * * * *

"Certified charter vessel" means a fishing vessel of a non-U.S. flag nation, which is operating under the jurisdiction of the marine mammal laws and regulations of another, harvesting, nation by a formal declaration entered into by mutual agreement of the nations.

* * * * *

"ETP" means the eastern tropical Pacific Ocean which includes the Pacific Ocean area bounded by 40° N. latitude, 40° S. latitude, 160° W. longitude and the coastlines of North, Central and South America.

"ETP Fishing Area 1" means the northern coastal portion of the ETP east of 117° W. longitude and north of 5° N. latitude.

"ETP Fishing Area 2" means the offshore area south of 14° N. latitude, north of 6° N. latitude, east of 150° W. longitude, and west of 123° W. longitude.

"ETP Fishing Area 3" means all other areas within the ETP not included in Fishing Areas 1 and 2.

* * * * *

"Harvesting nation" means the country under whose flag one or more fishing vessels are documented, or which has by formal declaration agreed to assert jurisdiction over one or more certified charter vessels, from which vessel(s) fish are caught that are a part of any cargo or shipment of fish to be imported into the United States, regardless of any intervening transshipments.

* * * * *

"Purse seine set on common dolphins" means a purse seine set in which more than 50 percent of the marine mammals captured are common dolphins.

* * * * *

"Kill-per-ton" means the number of small toothed cetacean marine mammals killed per ton of yellowfin tuna caught in sets made on marine mammals.

* * * * *

3. Section 216.24 is amended by revising paragraphs (e) (1), (2), (3), (4), and (5) to read as follows:

§ 216.24 Taking and related acts incidental to commercial fishing operations.

* * * * *

(e) *Importation.* (1) It is illegal to import into the United States any fish, whether fresh, frozen, or otherwise prepared, if such fish have been caught with commercial fishing technology that results in the incidental kill or incidental serious injury of marine mammals in excess of that allowed under this part for U.S. fishermen.

(2) The following fish and categories of fish, which the Assistant Administrator has determined may be involved with commercial fishing operations which cause the death or injury of marine mammals, are subject to the requirements of this subsection:

(i) *Yellowfin tuna.* The following U.S. Tariff Schedule Item Numbers identify the categories of tuna and tuna products under which yellowfin tuna is imported into the United States and which are subject to the restrictions of paragraphs (e)(3) and (e)(5) of this section:

110.10-20	Tuna: yellowfin, whole fish
110.10-25	Tuna: yellowfin, eviscerated, head on
110.10-30	Tuna: yellowfin, eviscerated, head off
110.10-37	Tuna: yellowfin, other
112.30-40	Tuna: canned, other than white meat, no oil—*except* cans marked as other than yellowfin tuna in a manner approved in advance by the Assistant Administrator
112.34-20	Tuna: canned, other, no oil—except cans marked as other than yellowfin tuna in a manner approved in advance by the Assistant Administrator
112.90-00	Tuna: canned, other, in oil—except cans marked as other than yellowfin tuna in a manner approved in advance by the Assistant Administrator
113.56-00	Tuna: other, not in oil, prepared or preserved—except shipments of loins and discs marked other than yellowfin tuna in a manner approved in advance by the Assistant Administrator.

(ii) *Salmon and halibut.* The following U.S. Tariff Schedule Item Numbers identify the categories of salmon and halibut products which are imported into the United States and are subject to the restrictions of paragraph (e)(4) of this section:

110.20-25	Halibut, fresh or chilled
110.20-30	Halibut, frozen
110.20-45	Salmon, fresh or chilled
110.10-50	Salmon, frozen
110.70-40	Halibut, other—except portion controlled steaks
111.48-00	Salmon, salted
111.88-00	Salmon, smoked or kippered
112.18-00	Salmon, preserved, not in oil

(3) *Yellowfin tuna.* (i) All shipments of tuna and tuna products listed in paragraph (e)(2)(i) of this section, from any nation, may not be imported into the United States unless a finding required in paragraph (e)(5) of this section has been made and unless accompanied by a separate Yellowfin Tuna Certificate of Origin (Standard Form 370-1).

(ii) The Yellowfin Tuna Certificate of Origin must include the following information:

(A) Country of registry of the fishing vessels involved;

(B) Nation under whose laws a certified charter vessel is operating;

(C) Exporter (name and address);

(D) Consignee (name and address);

(E) Identity and quantity of the tuna to be imported, listed by U.S. Tariff Schedule Number;

(F) Name of vessel(s) which caught the yellowfin tuna;

(G) Other documentation as may be required by the Assistant Administrator, subsequent to granting a finding in paragraph (e)(5) of this section; and

(H) A declaration signed either by a responsible government official of the country whose flag vessel or certified charter vessel caught the fish, the owner's representative, or the vessel master which states: "I certify that the above information is complete, true and correct to the best of my knowledge and belief."

(4) *Salmon and halibut.* All shipments of fish and fish products listed in paragraph (e)(2)(ii) of this section, from any nation, may not be imported into the United States unless the following conditions are met:

(i) The shipment is accompanied by a commercial invoice and/or a bill of lading indicating the following.

(A) Nation of registry of the fishing vessel(s) involved;

(B) Exporter (name and address);

(C) Consignee (name and address);

(D) Identity and quantity of the fish or fish products to be imported; *and*

(ii) The shipment is accompanied by a statement by a responsible official of the harvesting nation or the master of the vessel which caught the fish that such fish were not caught in a manner prohibited for U.S. fishermen by these regulations. The statement will identify the species, quantity, and exporter of the fish to which the statement refers, and be submitted at the time of importation; *or*

(iii) A responsible official of the harvesting nation may certify to the Assistant Administrator that all of its flag vessels are fishing in conformance with these regulations or that the fishing technology practiced by the harvesting nation with respect to the species of fish presented for importation into the United States does not result in deaths to marine mammals in excess of that which results from U.S. commercial fishing operations as prescribed by these regulations. Upon receipt of a statement of conformance, the Assistant Administrator may then make a finding, and publish such finding in the **Federal Register**, that fish imports listed in paragraph (e)(2)(ii) of this section from the nation were not caught with commercial fishing technology which results in the incidental kill of marine mammals in excess of U.S. standards.

(5) *Yellowfin tuna.* (i) Any tuna or tuna products in the classifications listed in paragraph (e)(2)(i) of this section, from nations whose flag vessels and certified charter vessels of 400 tons carrying capacity or greater operate in the ETP tuna purse seine fishery, as determined by the Assistant Administrator, may not be imported into the United States unless the Assistant Administrator makes a finding in consultation with the U.S. Department of State and publishes the finding in the **Federal Register** that:

(A) The government of the harvesting nation has adopted a regulatory program governing the incidental taking of marine mammals in the course of such harvesting that is comparable to the regulatory program of the United States; and

(B) The average rate of that incidental mortality by the vessels of the harvesting nation is determined comparable to the average rate of incidental mortality of marine mammals by U.S. vessels in the course of such harvesting. Upon such a finding, unloading will be allowed for the period of validity specified in the finding.

(ii) A harvesting nation which desires an initial finding under these regulations that will allow it to export to the United States those products listed in paragraph (e)(2)(i) of this section must submit by appropriate government official to the Assistant Administrator the information listed below 120 days before that nation wants to begin exportation of yellowfin tuna to the United States. The required information follows.

(A) A detailed description of the nation's regulatory and enforcement program governing incidental taking of marine mammals in the purse seine fishery for yellowfin tuna, including:

(*1*) A description, with copies of relevant laws, implementing regulations and guidelines, of the gear and procedures required in the fishery to protect marine mammals;

(*2*) A detailed description of the method (e.g., international or national observer records) by which the incidental mortality of marine mammals will be monitored; and

(*3*) A description of the methods used to identify problems and solutions to improve the performance of individual fishermen in reducing incidental mortality and how they will be advised.

(B) A list of its vessels and any certified charter vessels of 400 tons carrying capacity and greater which purse seined for yellowfin tuna at any time during the preceding two years in the ETP, indicating the status of each such vessel during that two year period (i.e. actively fishing in ETP, fishing in other waters; in port for repairs; inactive) and the status of each vessel expected to operate in the ETP in the year in which the submission is made.

(C) The best available data for the 1986 calendar year and any subsequent calendar year on the performance of its purse seine vessels (including certified charter vessels) fishing for tuna associated with marine mammals within the ETP including the following:

(*1*) Total number of tons of yellowfin tuna observed caught in each fishing area by purse seine sets on:

(*i*) Common dolphin and

(*ii*) All other marine mammal species;

(*2*) Total number of marine mammals observed killed in each area by purse seine sets on:

(*i*) Common dolphin and

(*ii*) All other marine mammal species;

(*3*) Number of observed trips and number of observed purse seine sets on marine mammals by the nation's purse seine fleet during the year;

(*4*) Total number of vessel trips and total number of purse seine sets on marine mammals by the nation's purse seine fleet during the year; and

(*5*) The number of observed purse seine sets in which more than 15 marine mammals were killed.

(D) A description of the source of the data requested in paragraph (e)(5)(ii)(C) of this section and, if from other than the Inter-American Tropical Tuna Commission, a description of the method used to obtain data on marine mammal mortality by species/stocks in sufficient detail to certify the authenticity and accuracy of the data.

(iii) The Assistant Administrator's determination on a nation's initial finding will be announced within 120 days of receipt of the information described in paragraph (e)(5)(ii) of this section and will be published in the **Federal Register**. A finding will be valid only for the calendar year for which it was issued.

(iv) A harvesting nation for which a positive finding under this section is in effect may request a renewal of such a finding for the subsequent calendar year by submitting, by the appropriate government official, to the Assistant Administrator the following information either by July 31 of the current year or for nations participating in the IATTC observer program, 14 days after the date the IATTC releases data on porpoise mortality, whichever is later:

(A) A description (with copies of relevant new laws, regulations and guidelines) of any changes in the regulatory program of that nation governing incidental taking of marine mammals in the yellowfin tuna purse seine fishery by its vessels and any certified charter vessels;

(B) Any changes in the number, names or status of vessels on the nation's list of vessels and certified charter vessels which may be involved in the taking of marine mammals incidental to yellowfin tuna purse seining in the following year;

(C) Data required by paragraph (e)(5)(ii)(C) of this section for the preceding fishing year. A nation will be required to submit vessel performance data on any vessels leaving its fleet for that portion of the year that the vessel operated under its flag or as a certified charter vessel;

(D) A description of the actions taken by the nation in the previous year to achieve greater reductions in marine mammal mortality incidental to purse seining by its vessels or any certified charter vessels; and

(E) A statement of the source of the data requested in paragraph (e)(5)(ii)(C) of this section and, if from other than the Inter-American Tropical Tuna Commission, a description of the method used to obtain data on marine mammal mortality by species/stocks in sufficient detail to certify the authenticity and accuracy of the data.

(v)(A) The Assistant Administrator will make a positive finding or renew a positive finding for a harvesting nation if:

(*1*) The harvesting nation has provided all information required by paragraphs (e)(5)(ii) or (e)(5)(iv) of this section;

(*2*) The nation's regulatory program is comparable to the regulatory program of the United States as described in paragraphs (a), (b), (c), (d)(2), and (f) of this section;

(*3*) The data on marine mammal mortality submitted by the harvesting nation are determined to be accurate; and

(*4*) The average kill-per-ton rate for the longest period of time for which data are available, up to 5 years, or for the most recent year, whichever is lower, does not exceed the U.S. kill-per-ton rate for the same period by the amount specified in paragraph (e)(5)(v)(D) of this section below.

(B) During an initial five-year baseline period (1986–90), the Assistant Administrator will not make a negative finding based on the kill-per-ton rate because adequate data are not available. However, the annual kill-per-ton rate for nations must demonstrate a negative trend in order for a nation to retain a positive finding. A negative trend will be assessed by fitting a line to the annual kill-per-ton rates for the years after 1985 and determining the slope of the line. If the U.S. kill-per-ton rate increases during this period, the rate for harvesting nations can increase in proportion to the U.S. rate. However, if the annual kill-per-ton rate for any nation does not decline or remain proportional with any increase in the U.S. rate, after 1988 the Assistant Administrator will issue a negative finding unless, after a review of the nation's explanation of the causes and actions taken, the Assistant Administrator determines that the actions taken are likely to sustain a reduction of marine mammal mortality in the future. In conducting the review, the Assistant Administrator will request specific details concerning the actions taken to identify and counsel individual skippers whose performance is unsatisfactory and to handle any other specific factors causing the high mortality rates.

(C)(*1*) After 1990, those harvesting nations having purse seine vessels of 400 tons carrying capacity or greater that harvest yellowfin tuna in the ETP and whose vessels have observer data for at least five (5) trips and 100 sets per year must have an average mortality rate which is no more than 25 percent greater than the U.S. average.

(*2*) Harvesting nations having purse seine vessels of 400 tons carrying capacity or greater that harvest yellowfin tuna in the ETP and whose vessels have observer data for fewer than five (5) trips and 100 sets per year are recognized as likely to experience greater variation in their kill-per-ton rates due to the small number of sets observed during a year. These nations must have an average mortality rate which is no more than 75 percent greater than the U.S. average.

(D) A nation's average mortality rate will be compared with the U.S. mortality rate which is weighted to account for dissimilar amounts of fishing activities between the two nations in the three ETP fishing areas and for the two species groups.

(E) The Assistant Administrator will consider an explanation of special circumstances, submitted by a harvesting nation with a request for a finding, describing reasons and actions taken to mitigate marginal performance and unusually high rates of marine mammal mortality.

(vi) The Assistant Administrator may require verification of statements made in connection with requests to allow importations. The Assistant Administrator may reconsider a finding upon a request from and the submission of additional information by the harvesting nation.

(vii)(A) Any finding in effect on the date the interim final rule becomes effective will terminate without further notice 180 days after that date unless the Assistant Administrator has received within 120 days of that date a valid, signed and substantially complete application for a new finding in which case the existing finding will remain in effect until the Assistant Administrator's decision is announced.

(B) The time limits specified in paragraphs (e)(5) (ii) and (iii) of this section do not apply to a harvesting nation that applies in a timely manner for a new finding under paragraph (e)(5)(vii)(A) of this section.

(C) Paragraph (e)(5)(vii) of this section is effective only until September 1, 1989.

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